DOCUMENT RESUME

ED 068 339 SE 014 916

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TITLE	The Curious Entanglement of Law, Politics, and the Environment.
INSTITUTION	Brevard County School Board, Cocoa, Fla.
SPONS AGENCY	Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
PUB DATE	72
NOTE	369p.; The 20 35mm slides cannot be reproduced
EDRS PRICE	MF-$0.65 HC-$13.16
DESCRIPTORS	*Environment; Instructional Materials; *Legislation; *Politics; *Resource Units; Secondary Grades; Social Sciences; *Teaching Guides
IDENTIFIERS	*Elementary Secondary Education Act Title III; ESEA Title III

ABSTRACT

Since environmental problems are becoming increasingly important as political issues, these resource units serve as a base for the study of political and legal influences on environmental control. Inquiry questions and learning activities are designed to gain an understanding of: (1) the forces that give impetus to present environmental law, (2) the relationship of different levels of government that are involved in the environment whether in policy setting, law making, or enforcement capacity, and (3) court procedures in environmental cases. Also, they provide an opportunity to: (1) recognize types of propaganda and evaluate facts utilized in making environmental decisions, (2) recognize that instigating environmental improvement implies responsible financial backing, and (3) participate in bringing about desired changes by responsible action. Each of the three units, Local Government and the Environment, State and Federal Government and the Environment, and Awakening the Process for Change, is sub-divided into inquiry questions, learning activities, resource materials, possible evaluation techniques, teacher suggestions, student comments, and teacher comments. A resource bibliography also includes a set of 20 35mm slides. This work was prepared under an ESEA Title III contract for the project "Broad Spectrum Environmental Education Program." (BL)

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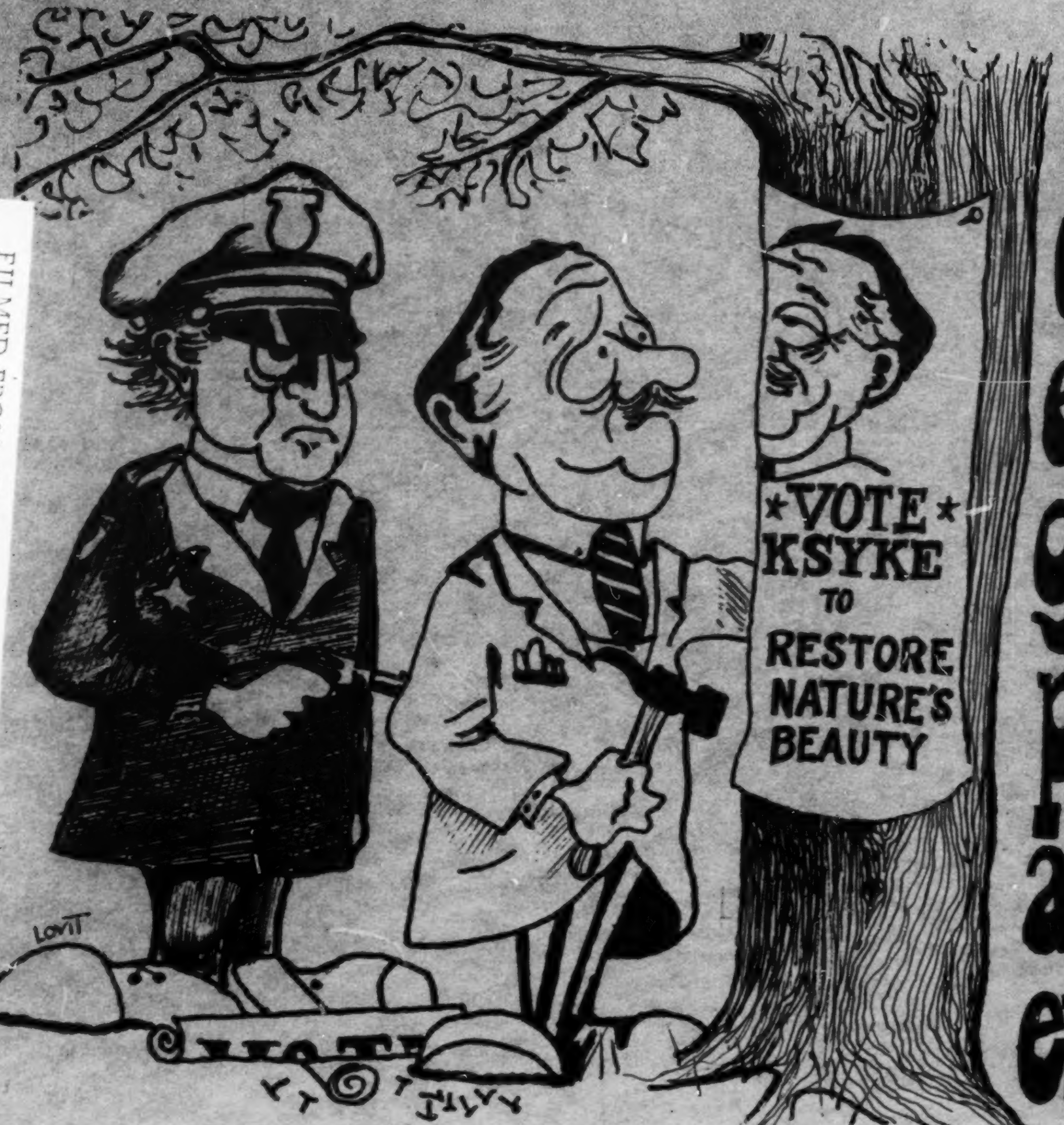
the curious entanglement of law, politics, and the environment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POLITICAL/LEGAL RESOURCE UNITS

Special Pilot Testing Material

Developed by the Political/Legal Environteam

as a portion of the

Title III, ESEA Project DOE, #050-723003-2322

"BROAD SPECTRUM ENVIRONMENTAL EDUCATION PROGRAM"

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The work presented or reported herein was performed pursuant to a grant from the United States Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the United States Office of Education, and no official endorsement by the United States Office of Education should be inferred.

PURPOSE

Environmental problems as political issues are becoming increasingly important. In asking how serious the threat to the environment is and what should be done, one finds a big difference in the degree of concern evidenced by different groups. At one extreme is a group that contend that the threat to the environment is being deliberately exaggerated to distract voters from the problems of poverty and the war in Vietnam. At the other extreme is a group who claim that already the damage to the ecological balance of nature is so extensive and irreversible that man has left himself no avenue of escape.

In this political arena decisions are being made and laws passed that will influence the quality of life of all of us in the future.

By guiding students toward conclusions to the Inquiry Questions in the following Units the teacher and student will:

1. Gain understanding of the forces that gave impetus to present environmental law.
2. Gain understanding of the relationship of the different levels of government who are involved in the environment whether in policy setting, law making, or enforcement capacity.
3. Gain understanding of court procedures in environmental cases.
4. Be able to recognize types of propaganda and to evaluate facts utilized in making environmental decisions.
5. Recognize that instigating environmental improvement implies responsible financial backing.
6. Be motivated to participate as an individual in a group to bring about desired changes by responsible action.

These Units are in no way intended to be exhaustive but rather to serve as a sampling. Teachers and students are urged to follow paths of interest to greater depths.

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FORWARD

This study of political and legal influence on environmental control is composed of three major units of study. Resource Unit One is entitled, "Local Government and the Environment." Resource Unit Two is named, "State and Federal Government and the Environment." Resource Unit Three is called, "Awakening The Process for Change." Each unit is sub-divided into topics and into Inquiry Questions. Each major Inquiry Question is provided with selective learning activities, resource materials, possible evaluation techniques, and suggestions for the teacher. Immediately following each unit is a Student Comment (SC) section, which contains resource materials for the student. After the Student Comment section there is a Teacher Comment (TC) division which contains resource and background materials for the teacher. The teacher is strongly urged to reproduce these materials as teaching aids for his students.

The activities found in these Units are loosely based on the Inquiry Approach to learning. The student's role in making generalizations is of primary importance. The success of most of the suggested activities in these Units rests upon the degree of inquiry and active participation of the student.

It will be noted that certain steps in the Inquiry Approach, forming hypotheses and testing conclusions, have not been explicitly illustrated. It is hoped that the creative teacher will develop and insert activities of this nature which will best suit his needs.

Teachers using more traditional methods will find these Units, even though somewhat founded on the Inquiry Approach, to be of a definite asset in organizing their thinking along environmental lines.

The C.E.E. (Center for Environmental Education) mentioned throughout the Units is a source of lending material. Please contact the C.E.E. well in advance for needed resources. The C.E.E. is located at Monroe Center, 705 Avocado Avenue, Cocoa, Florida, 32922.

ACKNOWLEDGEMENT

My gratitude is extended to the Environteam for their tireless efforts in developing these Resource Units. The money earned is hardly enough compensation for the long hours and difficult assignments required to make this project a success. My personal thanks are given to Jackie Heaton, Vernon Loyd, Wayne Smith, Janette Speck, and Daniel Voss for a job well done.

Special recognition goes to Professor Steven Valavanis of Brevard Community College for his poignant advice and constructive criticism.

I also acknowledge, with the deepest of appreciation, the secretarial assistance rendered to this project. The false starts, changes, pressures, and various details were handled admirably by Mrs. Joan Creech, Mrs. Dottie Riley, and Mrs. Patsy Higgins.

Last, but by no means least special thanks is given to Lovit Hines, Merritt Island High School, for his superb illustrations which greatly enhance the overall effect of the materials.

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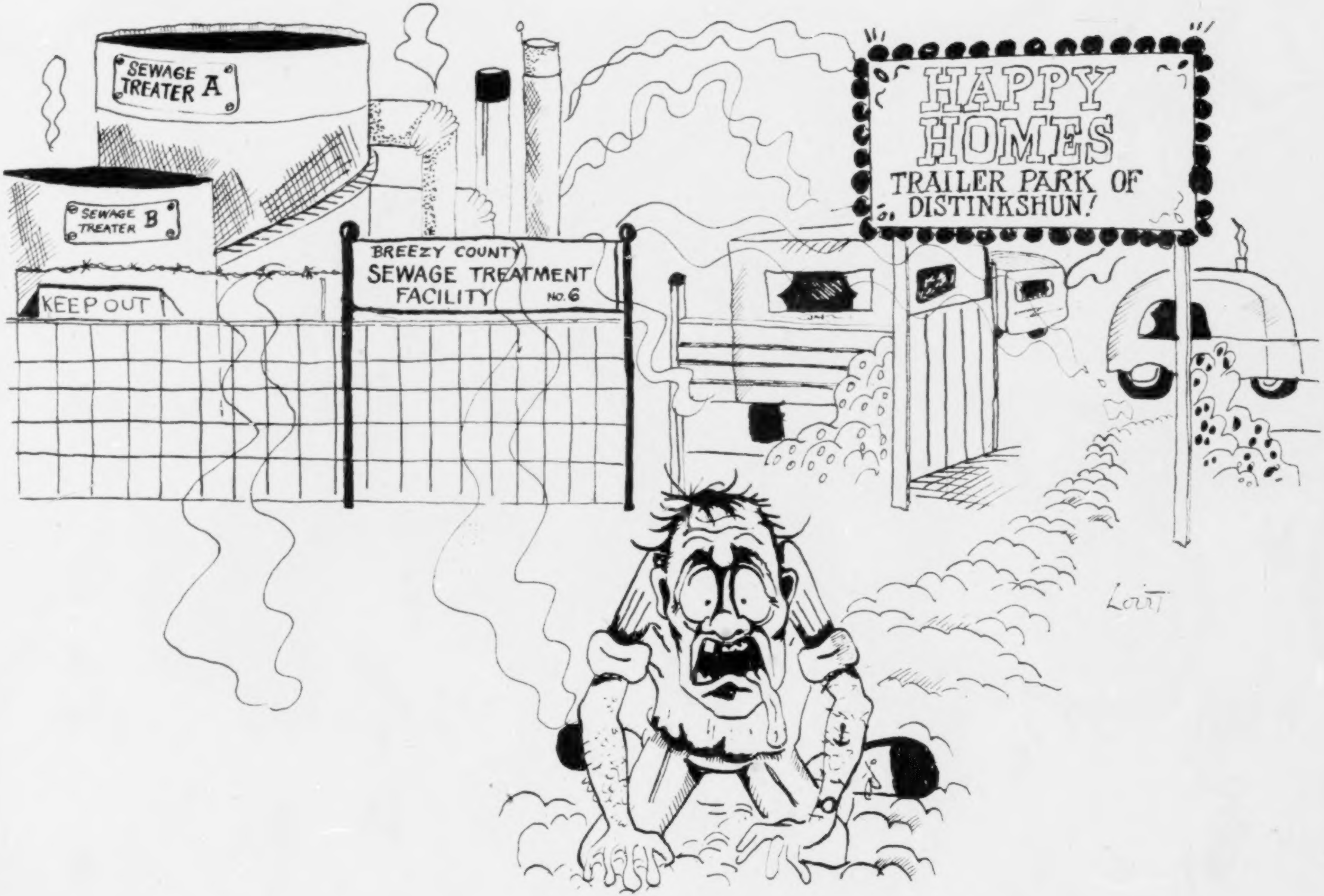
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SEWAGE TREATER B
KEEP OUT
BREEZY COUNTY
SEWAGE TREATMENT
FACILITY
NO. 6
HAPPY
HOMES
TRAILER PARK OF
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POLITICAL/LEGAL RESOURCE UNIT ONE: LOCAL GOVERNMENT AND THE ENVIRONMENT

INQUIRY QUESTIONS

I. What events or forces gave impetus to current environmental laws? 2

II. How does the individual discover what local environmental laws are in existence? 4

III. How do various governmental agencies effectively enforce environmental control laws? 6

IV. How do agencies on different levels of government interact? 8
    A. Do they duplicate efforts?
    B. What problems arise from enforcing various pollution laws?

V. Under what conditions would a citizen need to seek court action in a pollution case? 11

VI. How would an individual citizen bring a pollution case to court? 13

VII. What types of environmental redress have the courts given to individuals or groups? 15

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IX. How do local governments pollute? 18

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Inquiry Question: I. What events or forces gave impetus to current environmental laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity #1:			
A. VIEW/LIST 1. Divide class into small groups 2. Each group studies Student Comment (SC) # 1. 3. Each group lists answers to this question: From just looking at the maps, what environmental problems would you forsee for this area?	A. VIEW LIST Student Comment (SC) #1, page 21. (maps of Brevard County showing population distribution, major highways, dumps, sewer outfall, power plants, and water ways)	A. VIEW/LIST If teacher wishes, collect and evaluate list.	A. VIEW LIST Students should realize that with so many water ways water pollution may be a major concern. Also, the number of sewer outfalls should be noted. The teacher might want to discuss the possibility of a high water table in an area with so much surrounding water.
B. DISCUSS In class discussion, students consolidate the list reported from each group.	B. DISCUSS	B. DISCUSS Teacher Comment (TC) #1, page 42. (participation)	B. DISCUSS
C. RESEARCH 1. Each student is to select one of the listed environmental problems and investigate to what degree it really is a local problem. 2. Students may use any one of the following methods: a. Letters to local governmental agencies b. Interviews with local governmental agencies c. Library research d. Newspaper clippings mounted and summarized.	C. RESEARCH Suggested sources: Brevard County Commissioners, city mayors, manager of Merritt Island National Wildlife Refuge, County Game Warden, Brevard County Board of Public Health, TODAY newspaper, Library, Indian River Audubon	C. RESEARCH If teacher wishes, collect and evaluate any written research work.	C. RESEARCH 1. Teacher Comment (TC) #'s 2 - 12, pages 43-53, give background to this Inquiry Question. 2. These may be reproduced for student use.

Inquiry Question:

I. What events or forces gave impetus to current environmental laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
	Society, League of Women Voters.		
D. REPORT/DISCUSS 1. Each student reports findings to the class. 2. Class discusses reported findings, compares with original list and arrives at a conclusion to the Inquiry Question.	D. REPORT/DISCUSS	D. REPORT/DISCUSS 1. TC # 13, page 54, (oral reports). 2. TC # 1, page 42, (participation).	D. REPORT/DISCUSS

Inquiry Question: II. How does the individual discover what local environmental laws are in existence?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. DISCUSS/LIST 1. Divide class into 3 groups and assign one of the following questions to each: a. In what ways is water being polluted? b. In what ways is air being polluted? c. In what ways is land being polluted? 2. Have each group discuss and list answers to their question.	A. DISCUSS/LIST	A. DISCUSS/LIST 1. TC #'s 14, 15, 16, 17, pages 55-58, (evaluation forms for small groups).	A. DISCUSS/LIST
B. REPORT 1. Group reports their list to the class. 2. Lists are added to the chalkboard.	B. REPORT	B. REPORT TC # 13, page 54, (oral report).	B. REPORT
C. RESEARCH 1. In small groups, students select a problem from the list and search for a specific local ordinance (or state law) that prohibits that pollution problem. 2. Students are to make up a "plan of attack" for discovering answers. 3. Allow time to carry out "plan of attack".	C. RESEARCH 1. Most local libraries have Codes for city, county, and state governments. 2. Individuals or groups to whom students may go:(NOTE: Use only after students fail to come up with a "plan of attack") police or sheriff, health department,	C. RESEARCH "Plan of Attack" could be collected and graded by teacher	C. RESEARCH 1. The objective of the research is for the student to discover ways of learning which laws are in existence. We are more interested in the process of discovering what laws exist than in a particular law. 2. Allow students to formulate "plans of attack" and follow through with their suggested methods. A "plan

Inquiry Question: II. How does the individual discover what local environmental laws are in existence?

Learning Activities	Resources	Evaluation	Teacher Suggestions
	city or county commissioners, county or city attorneys, county solicitor, Secretary of State, state legislators, state environmental agencies, local lawyers, Bar Association, various environmental groups (e.g. Conservation 70's, Sierra Club, Audubon Society, Isaak Walton League).		of attack" is the method used to discover what laws exist.
D. REPORT 1. Each group reports to class. 2. Report includes these: a. Problem researched b. Specific ordinance (or law) applying to problem or lack of one c. "plan of attack". 3. Record groups' information on chalkboard, with special emphasis on the various "plans of attack ".	D. REPORT	D. REPORT 1. TC # 13, page 54 (oral report) 2. If teacher wishes, written report could be made.	D. REPORT
E. DISCUSS Class discusses which "plan(s) of attack" appear to be most effective and arrives at conclusion to Inquiry Question.	E. DISCUSS	E. DISCUSS TC # 1, page 42 (participation)	E. DISCUSS

Inquiry Question: III. How do various governmental agencies effectively enforce environmental control laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity #1:			
A. VIEW/DISCUSS/LIST 1. Show slides 1 and 2. 2. Class discusses these questions on the slides: -Who posted these signs? -Who is supposed to enforce this ordinance (or law)? -What methods of enforcement are depicted in the slides? 3. List on chalkboard answers to these questions: -What other environmental laws can you name? (see earlier activity for question I.) -What governmental agencies are responsible for enforcing these laws? -What are other ways to enforce environmental laws?	A. VIEW/DISCUSS/LIST Slides 1 and 2, Selected Resources page S-35 (shows State Department of Transportation signs which tell the fines for littering highways.)	A. VIEW/DISCUSS LIST TC # 1, page 42 (participation)	A. VIEW/DISCUSS LIST TC # 18, page 59 .(goals), TC # 19, page 61 .(Health Department Report), TC # 20, page 67 , (public servants), TC # 26, page 80 , (traffic cops), give general background to this Inquiry Question.
B. READ 1. Have students read SC # 2. 2. As students read, they should note both the enforcement agencies and methods of enforcement mentioned or inferred.	B. READ SC # 2, page 25 , (excerpts from Chapter 20 of the Brevard County Code)	B. READ 1. A teacher or student-made quiz could cover the reading assignment. 2. Notes could be collected and graded.	B. READ
C. HOLD PANEL DISCUSSION 1. Invite representatives from	C. HOLD PANEL DISCUSSION	C. HOLD PANEL DISCUSSION 1. TC # 1, page 42	C. HOLD PANEL DISCUSSION Alternative: Invite a single

Inquiry Question: III. How do various governmental agencies effectively enforce environmental control laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
various agencies identified in Section C of previous activities. 2. Entitle the discussion "Effective Enforcement of Environmental Laws" and allow students to compose questions for the guests well in advance of their arrival.		(participation) 2. If note-taking is required, collect and evaluate.	speaker from only one of the agencies.
D. DISCUSS/LIST 1. After guests have left, class discusses ways governmental agencies enforce environmental laws. 2. Local agencies and their methods are listed on the chalkboard as they are discussed. 3. Class agrees on a general answer to the Inquiry Question by completing a final list.	D. DISCUSS/LIST	D. DISCUSS/LIST TC #1, page 42 (participation)	D. DISCUSS/LIST Encourage students to compare their list developed in Section A with information from the panel discussion. Did panel confirm ideas on what agencies do?
E. WRITE OPINION 1. Students tell why they agree or disagree with the President's Science Advisory Committee's statement. 2. Have each student write his opinion.	E. WRITE OPINION President's Committee stated, "...in the long run improving both numbers and quality of highly trained manpower engaged in key actions from research to enforcement will do the most for us and merits the highest priority."	E. WRITE OPINION Collect and grade written opinions	E. WRITE OPINION

Inquiry Question: IV. How do agencies on different levels of government interact?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity #1:			
A. READ 1. Have students read SC #'s 3, 4, 5, 6. 2. Guideline questions for reading: -What is the issue that is being considered? -What levels of government are cited in these articles? (examples) -What part is each level of government playing? (e.g., FCD wants to build a dam)	A. READ SC #'s 3, 4, 5, 6, pages 28-31.	A. READ 1. Written answers to Guideline questions could be collected and graded. 2. A short quiz could be given on reading assignment.	A. READ TC # 21, page 68, background on this section of Inquiry Question
B. DISCUSS/LIST 1. Class discusses guideline questions. Other general questions: -What group was the EPA trying to protect in demanding the Lake Washington Dam not be built? -Whose interests did the County Commissioners have in asking the Flood Control District to proceed with the dam? -How is it possible for two agencies to take different views of a question while acting in the interests of the same group? 2. List answers on chalkboard.	B. DISCUSS/LIST	B. DISCUSS/LIST TC # 1, page 42 (participation)	B. DISCUSS/LIST

Inquiry Question: IV. How do agencies on different levels of government interact?

Learning Activities	Resources	Evaluation	Teacher Suggestions
C. COLLECT CLIPPINGS 1. Divide class into small groups. 2. Groups select a problem from list in B Section, if it is extensive, or find one in local newspapers. 3. For a period of time, have students cut out news articles pertaining to a problem of this nature (intergovernmental action). 4. News articles are to be mounted, documented, and summarized.	C. COLLECT CLIPPINGS	C. COLLECT CLIPPINGS Mounted news articles collected and evaluated.	C. COLLECT CLIPPINGS
D. REPORT Have groups report about their problem to the class, identifying the same elements found in A Section's Guideline question.	D. REPORT	D. REPORT TC # 13, page 54 (oral report)	D. REPORT
E. DISCUSS 1. Class discusses these two questions: -What problems are caused when different governmental entities act on the same issue? -How did these entities cooperate in solving problems ? 2. List remarks on chalkboard. 3. Class discusses and lists on chalkboard ways in which the various levels of government cooperated or conflicted in this situation.	E. DISCUSS	E. DISCUSS TC # 1, page 42 (participation)	E. DISCUSS

Inquiry Question: IV. How do agencies on different levels of government interact?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity #2:			
A. READ 1. Have students read SC #'s 7, 8, 9. 2. Guideline questions for reading. -What governmental entities are involved in the major issue? -What pollution problems are identified? -What solutions are proposed? -How are the different governmental entities going about solving the problem?	A. READ SC #'s 7, 8, 9, pages 32-35.	A. READ Written notes on guideline questions could be collected.	A. READ 1. TC # 22, page 72 (government cooperation) 2. Your own research should turn up local examples in this problem area (intergovermental action).
B. DISCUSS 1. Class discusses guideline questions. 2. Identify and list on board any similar situations in your locale.	B. DISCUSS	B. DISCUSS TC # 1, page 42 (participation)	B. DISCUSS

Inquiry Question: V. Under what conditions would a citizen need to seek court action in a pollution case?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1: A. RESEARCH/DISCUSS/LIST 1. Divide the class into small groups. 2. Have students answer the following question: What kind of damages might occur to an individual (or his property) as the result of pollution? 3. After research, have groups discuss their findings and list the damages they discovered.	A. RESEARCH/DISCUSS/LIST 1. School library, current magazines, newspapers, Vertical File, Facts on File. 2. Public library teachers usually can check out materials in quantities for classroom use.	A. RESEARCH/DISCUSS/LIST TC #'s 14, 15, 16, 17, pages 55-58 (small groups)	A. RESEARCH/DISCUSS/LIST 1. Small groups should consist of 5-7 members. 2. TC #'s 14, 15, 16, should be reproduced so students can do the evaluating within their groups. 3. Allow time in the school library or provide current materials in the class, in order that the question may be answered. 4. If possible, the teacher should read chapters 1.7, 1.8, and 1.13, from The Environmental Law Handbook, by Norman J. Landau and Paul D. Rheingold.
B. READ/DISCUSS 1. Have students read SC # 10. 2. Student groups discuss each type of damage listed and determine if there are legal theories available to provide corrections for the pollution problem.	B. READ/DISCUSS 1. SC #10, page 36 ("Three Major Legal Theories Frequently Used In Pollution Cases.")	B. READ/DISCUSS TC # 1, page 42	B. READ/DISCUSS TC # 25, page 77, describes constitutional rights to a clean environment.
C. READ/DISCUSS 1. Read SC # 10. 2. Student groups will identify all possible ways an individual	C. READ/DISCUSS 1. SC # 11, page 37 (Administrative Remedies First)	C. READ/DISCUSS	C. READ/DISCUSS

Inquiry Question: V. Under what conditions would a citizen need to seek court action in a pollution case?

Learning Activities	Resources	Evaluation	Teacher Suggestions
might bring about the correction of a pollution problem outside the courts.			
D. DISCUSS/REPORT 1. Each group arrives at conclusion for the Inquiry Question and prepares to defend. 2. Each group presents its answer to class and defends its choices.	D. DISCUSS/REPORT	D. DISCUSS/REPORT 1. TC # 13, page 54 (oral) 2. TC # 1, page 42 (participation)	D. DISCUSS/REPORT
E. DECIDE The class, by majority vote, will agree upon the best answer to the Inquiry Question.	E. DECIDE	E. DECIDE Students could be asked to write an essay stating why they agree or disagree with the majority decision.	E. DECIDE

Inquiry Question: VI. How would an individual citizen bring a pollution case to court?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity #1:			
A. INVITE SPEAKER 1. Ask a local attorney to speak on the subject of the Inquiry Question. 2. Students will ask questions and discuss the subject with the speaker.	A. INVITE SPEAKER	A. INVITE SPEAKER	A. INVITE SPEAKER 1. Inform attorney of topics to be discussed. Inform him of the age and characteristics of his audience. 2. Have students prepare possible questions in advance.
B. PLAN A FIELD TRIP Visit a local court to observe case procedure. If at all possible it should be a case on environmental problems.	B. PLAN A FIELD TRIP	B. PLAN A FIELD TRIP Students will make notes on their observations from the trip and will write an essay describing the entire experience.	B. PLAN A FIELD TRIP
C. PLAY ROLES 1. Students will read case study # 1. 2. Students will act out the following roles from the case study: a. Judge b. Defense Attorney c. Defendant d. Prosecutor e. Plaintiff f. Witnesses	C. PLAY ROLES AlA Mobile Home Park vs. Brevard County Case Study Selected Resources page S-5	C. PLAY ROLES 1. TC # 1, page 42 2. In a brief paper students will choose a side and defend it.	C. PLAY ROLES Students should be given time to prepare and rehearse their specific roles. You might record the case and play it back so that an accurate "court record" is kept.

Inquiry Question: VI. How would an individual citizen bring a pollution case to court?

Learning Activities	Resources	Evaluation	Teacher Suggestions
D. READ/DISCUSS 1. Students will read SC # 11. 2. The class will discuss the Inquiry Question and will arrive at an answer for the question.	D. READ/DISCUSS 1. SC # 12, "See Your Local Attorney" page 38	D. READ/DISCUSS Students will outline a procedure which could be used to bring a case to court.	D. READ/DISCUSS 1. Teacher should consider using the following cassette tape: "Suing for a Clean Environment." 2. Tape reviewed in Selected Resources. 3. Available from C.E.E.

Inquiry Question: VII. What types of environmental redress have the courts given to individuals or groups?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity #1:			
A. READ/DISCUSS/RESEARCH 1. Divide class into small groups and read SC # 13. 2. Student groups will discuss the Inquiry Question in general. 3. Go to library for further research. Findings of each individual will be brought back to the group and discussed. The group will list all examples of court redress which they have found and will prepare a presentation for the entire class.	A. READ/DISCUSS/RESEARCH 1. SC # 13, page 41, ("Ecological Criminals Court Sets Pollution Docket") 2. The Reader's Guide to Periodical Literature should help the student find the most current information on this subject. Students should also be urged to use the Vertical File in their library.	A. READ/DISCUSS/RESEARCH 1. Individual written research will be evaluated by the teacher. 2. Groups may be evaluated by TC # 14, 15, 16, 17, pages 55-58. (group evaluation)	A. READ/DISCUSS/RESEARCH 1. If at all possible, the teacher should read chapter 4, "What the Courts Have Done so Far for the Environment," in the book, The Environmental Law Handbook, by Norman Landau and Paul Rheingold. 2. The teacher should be sure that all students know how to use the Readers Guide and the other research facilities of the library. 3. TC # 24, page 74, elaborates on SC # 13.
B. REPORT Representatives from each group will present the results of their group's work to the class.	B. REPORT	B. REPORT TC # 13, page 54	B. REPORT
C. DISCUSS 1. The class will discuss the findings of each group and will agree upon the most complete conclusion possible for the Inquiry Question. 2. List final answers on chalkboard.	C. DISCUSS	C. DISCUSS 1. TC # 1, page 42 (participation) 2. At the close of class discussion, students will be asked to write out the most complete conclusion to the Inquiry Question.	C. DISCUSS

Inquiry Question: VIII. How do local governments finance their environmental control programs?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity #1:			
A. RESEARCH 1. Divide class into teams of investigators. 2. Each team selects a local city (or county) and researches the following: a. Taxes What are the various sources of revenue? How much money is actually collected in a given year? b. Budget How is the money spent (percentage or actual dollars) ? c. Environmental Impact What agencies in the community affect the environment ? (e.g. garbage disposal, sewage treatment, zoning, planning). What is the percentage of the budget allocated for these agencies?	A. RESEARCH City and county budgets may be located in public libraries or obtained from finance departments of local governmental units.	A. RESEARCH If written assignments are required, collect and evaluate.	A. RESEARCH 1. Write local city offices for information. 2. Arrange personal visits to the school by appropriate officials. 3. Have students arrange after school interviews at office of appropriate officials. 4. Arrange for class to visit and inspect a local environmental control agency of government in operation. Discuss its needs and financing problems and use information as part of research. 5. TC # 27, page 81, (financial assistance) gives general background to this Inquiry Question.
B. MAKE VISUAL AIDS Have each group prepare charts, graphs, etc. to illustrate in a visual way the information they have compiled.	B. MAKE VISUAL AIDS	B. MAKE VISUAL AIDS TC # 23, page 73 (visual)	B. MAKE VISUAL AIDS

Inquiry Question: VIII. How do local governments finance their environmental control programs?

Learning Activities	Resources	Evaluation	Teacher Suggestions
C. REPORT Have each group orally present their findings to the class.	C. REPORT	C. REPORT TC # 13, page 54 (oral)	C. REPORT
D. DISCUSS/LIST 1. After all presentations, through class discussion establish general conclusions to the Inquiry Question. 2. List these answers on the chalkboard.	D. DISCUSS/LIST	D. DISCUSS/LIST TC # 1, page 42 (participation)	D. DISCUSS/LIST

Inquiry Question: IX. How do local governments pollute?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1: A. VIEW SLIDES Show students slides.	A. VIEW SLIDES Slides # 3-7, Selected Resources, page S-35. 3. Sewage treatment plant. 4. Raw or poorly treated sewage entering waterway. 5. Garbage being disposed of at dump. 6. Close-up of discarded objects. 7. Discarded objects in foreground with scenic beauty in background.	A. VIEW SLIDES	A. VIEW SLIDES 1. Acquire maps of your city or county and locate areas on the map where SEWAGE is "treated," TRASH is "dumped," and GARBAGE is "disposed". Sources: -planning departments -zoning board -sanitation department -utility department 2. Compile a file of materials describing alternative methods of SEWAGE, TRASH, and GARBAGE disposal. Sources: -Westinghouse Electric Corp., Westing Bldg., Gateway Center, Pittsburg, Pennsylvania, 15222. -Envirogenics Co., 9200 East Flair Drive, El Monte, California, 91734.

Inquiry Question: IX. How do local governments pollute?

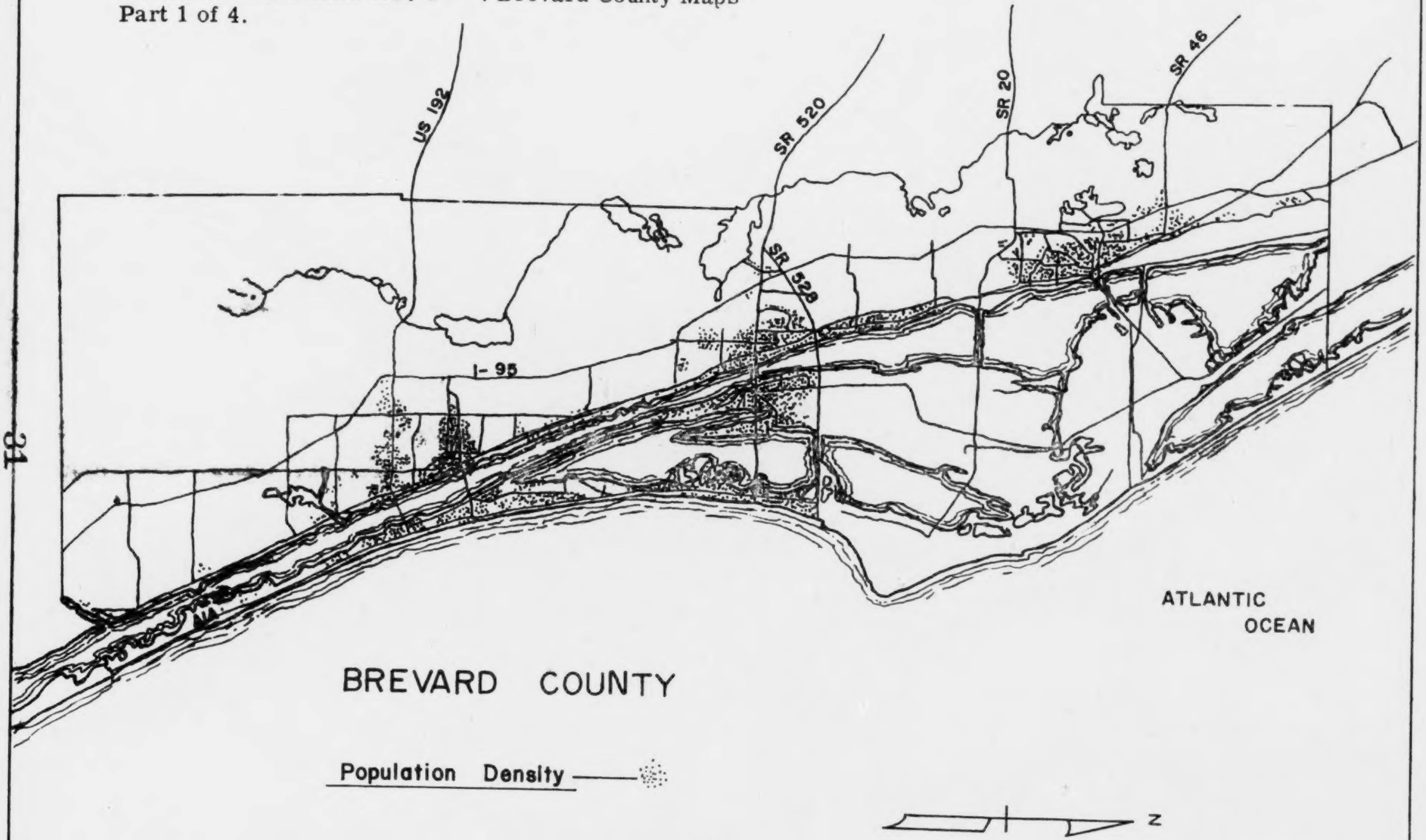
Learning Activities	Resources	Evaluation	Teacher Suggestions
B. DISCUSS 1. On the board, write "key words" suggested by the slides such as "sewage," "trash," and "garbage." 2. Present the Inquiry Question to the class for possible generalizations.	B. DISCUSS	B. DISCUSS TC # 1, page 42	B. DISCUSS
C. RESEARCH Divide class into teams of investigators to research the following areas: 1. Sewage -Where are sewage treatment plants in our area? -How is the sewage treated? 2. Dumps -Where are the dumps in our area? -What trash is allowed	C. RESEARCH	C. RESEARCH If teacher desires, collect written research work.	C. RESEARCH

Inquiry Question: IX. How do local governments pollute?

Learning Activities	Resources	Evaluation	Teacher Suggestions
there and what is not? 3. Garbage -How is garbage disposed?			
D. REPORT Present to class in a series of oral reports.	D. REPORT	D. REPORT TC # 13, page 54 (oral)	D. REPORT

STUDENT COMMENTS

STUDENT COMMENT NO. 1 : Brevard County Maps
Part 1 of 4.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SR 520
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BREVARD COUNTY
Population Density
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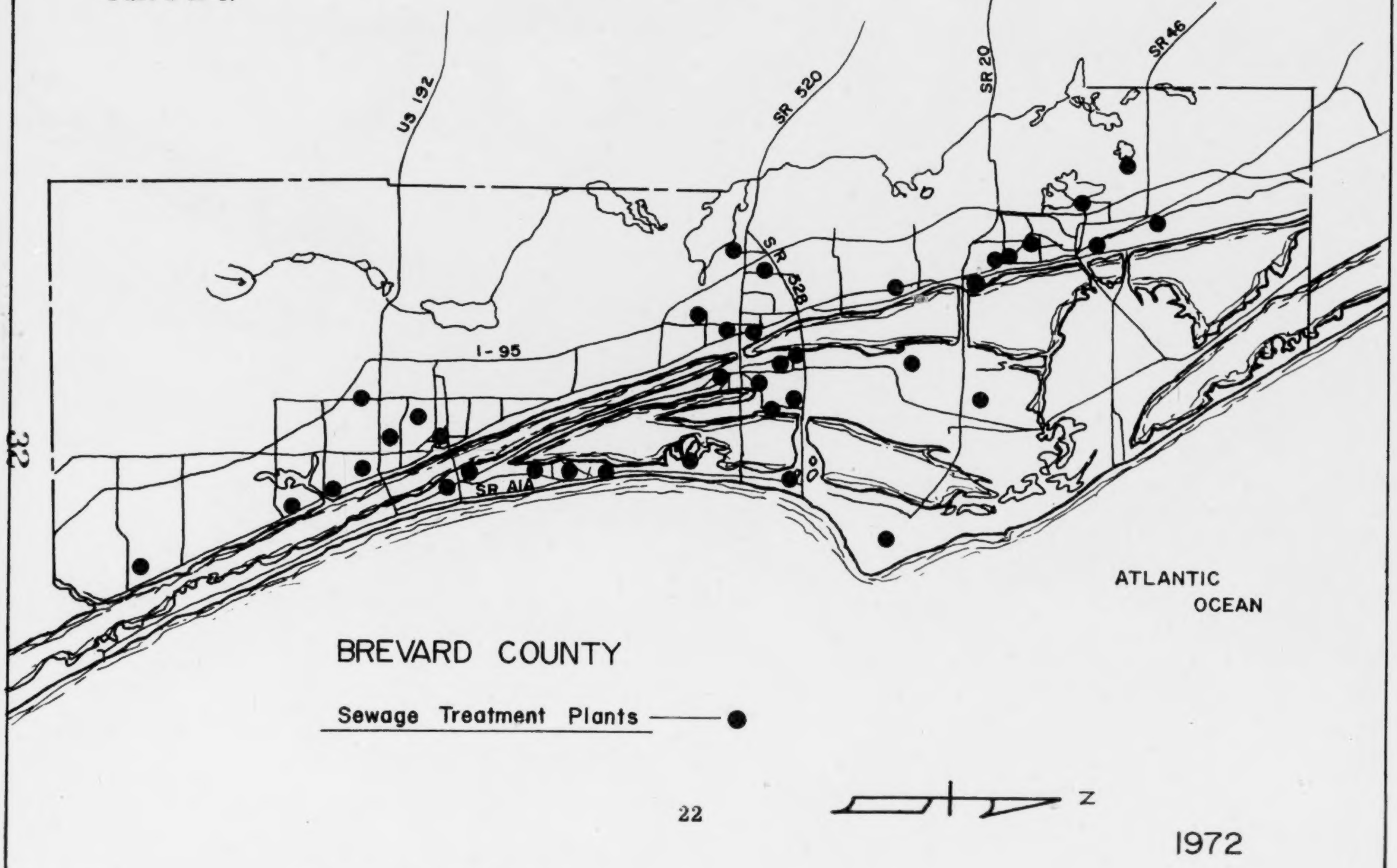
1972

STUDENT COMMENT NO. 1 : Brevard County Maps
Part 2 of 4.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SR 528
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SR A1A
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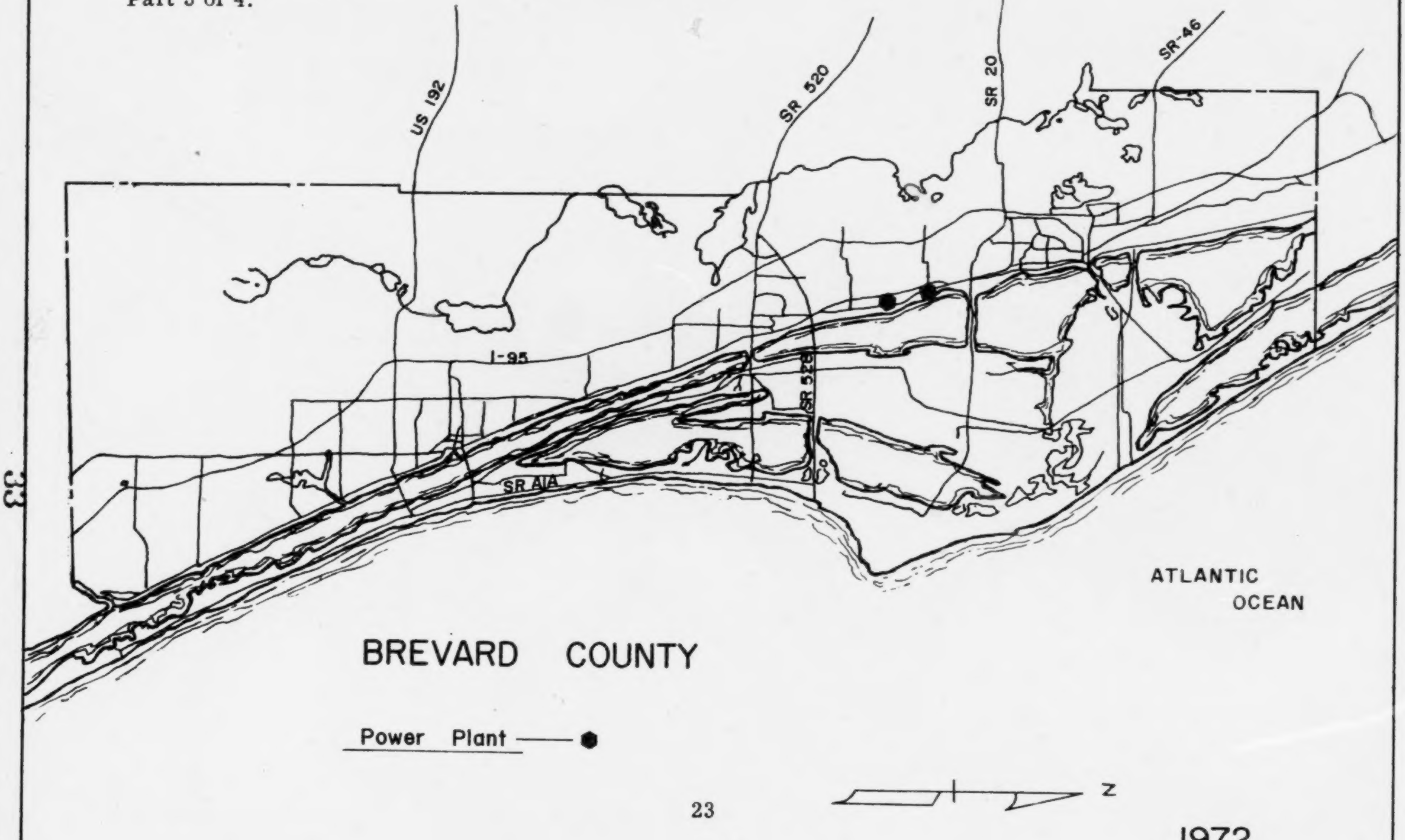
Sewage Treatment Plants ——— ●
N
1972

STUDENT COMMENT NO. 1 : Brevard County Maps
Part 3 of 4.


US 192
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SR 20
SR-46
I-95
SR 528
SR A1A
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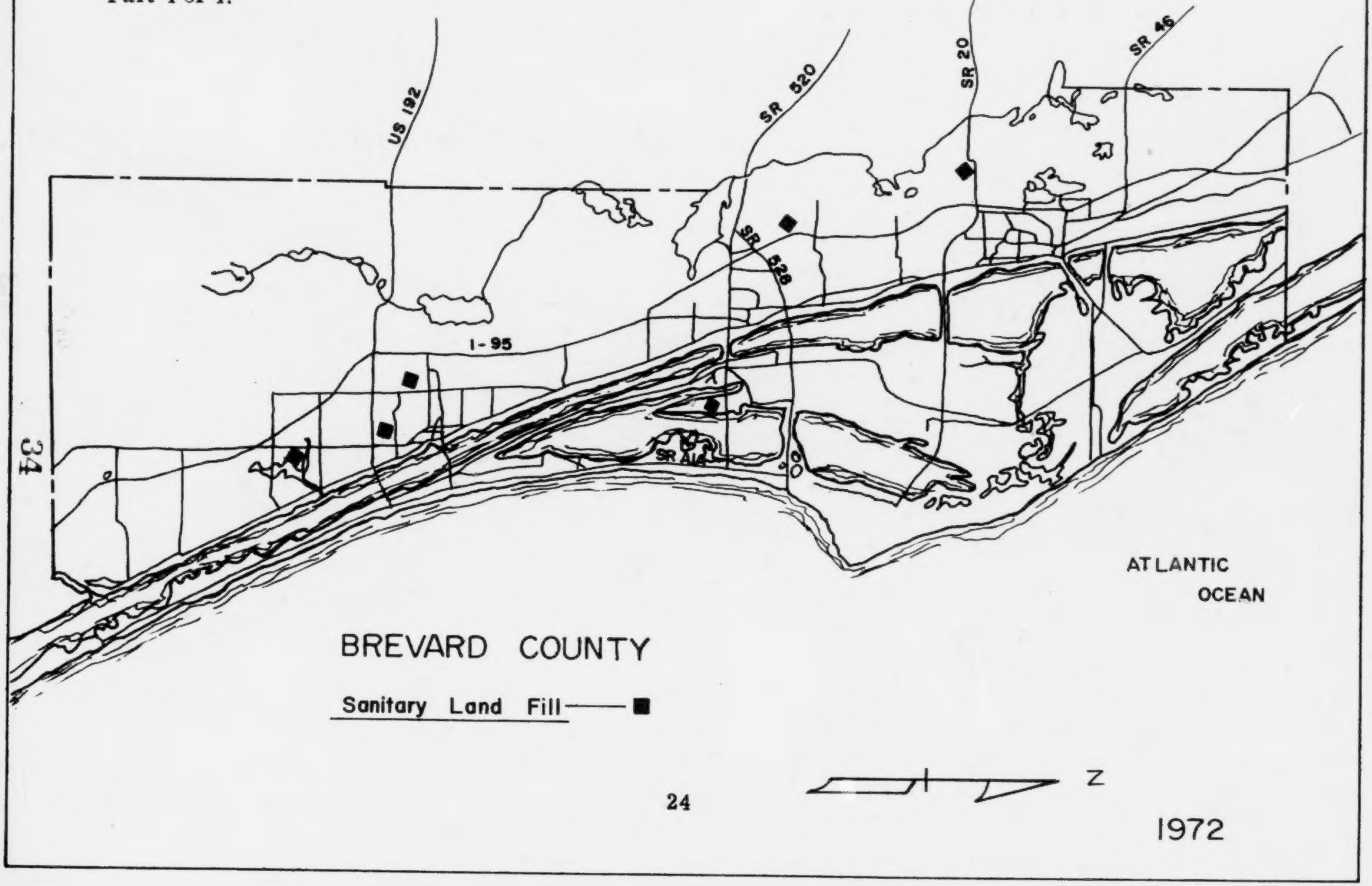
BREVARD COUNTY
Power Plant ——— ●
N
1972

STUDENT COMMENT NO. 1 : Brevard County Maps
Part 4 of 4.


US 192
SR 520
SR 20
SR 46
SR 528
I-95
SR A1A
ATLANTIC
OCEAN
BREVARD COUNTY
Sanitary Land Fill —— ■
24
N
1972

STUDENT COMMENT NO. 2 : Excerpts From Chapter 20 of the Brevard Code

Sec. 20-3. ENFORCEMENT OF ARTICLE.

The board of county commissioners of Brevard County, Florida and the State Board of Health of the State of Florida, jointly and severally, are hereby authorized and empowered to enforce the provisions of this act (article) and any rules, regulations or criteria established by the State Board of Health to control air and water pollution, by injunction or other legal means. (Sp. Acts, Ch. 59-1112, S.3).

Sec. 20-13. JURISDICTION: RULES AND REGULATIONS.

The board of county commissioners of Brevard County shall have the jurisdiction to control and prevent the pollution of air and the pollution of streams, lakes, rivers, ponds, inland waters, salt waters, watercourses, and other surface and underground waters located within Brevard County. The board of county commissioners of Brevard County shall have the authority to, and shall enforce the provisions of this act (article) and shall have the power to adopt and prescribe and promulgate rules, regulations and standards consistent with the known, available and reasonable methods of preventing pollution, and purposes of this act (article). (Sp. Acts, Ch. 59-1119, S. 3, 4).

Sec. 20-14. EMERGENCIES: COURT ACTION.

Whenever in the opinion of the board of county commissioners of Brevard County an emergency exists on account of any discharge, or threatened discharge, of waste matter which pollutes, tends to pollute or contribute to the pollution of the air or the waters of the county, the board is empowered and shall seek injunctive or abatement relief in a court of competent jurisdiction against such discharge or threatened discharge. (Sp. Acts, Ch. 59-1119, S. 5).

Sec. 20-17. STATE AID.

The board shall have the right to request and receive the assistance of any educational institution or state agency when it is deemed necessary by the board to carry out the provisions of this act (article), (Sp. Acts Ch. 59-1119, S. 9).

Sec. 20-18. APPROVAL OF SEWAGE SYSTEMS.

All plans and specifications for the construction in the county of new sewerage systems, sewage treatment or disposal plants or systems, or for improvements or extensions to existing sewerage systems, or sewerage treatment or disposal plants located outside municipalities, shall be submitted to and be approved by the board before construction thereof may begin. (Sp. Acts, Ch. 59-1119, S. 10)

State law reference - State board of health to supervise and control sewage systems, 381.281 Fla Stats

Sec. 20-19. NOTICE TO VIOLATORS: REPORT; ORDER OF BOARD

Whenever, in the opinion of the board, any person shall violate or is about to violate the provisions of this act (article) or fails to control the polluting content of waste discharged or to be discharged into any waters of the county, the board shall notify such person of its determination by registered mail. With in fifteen (15) days from the receipt of notice of such determination, such person shall file with the board a full report stating what steps have been and are being taken to control such waste or pollution. Whereupon the board may issue such order of directive as it deems appropriate under the circumstances, and shall notify such person thereof by registered mail. (Sp. Acts, Ch. 59-1119, S. 11)

Sec. 20-20. HEARING: APPEAL FROM ORDERS OR DIRECTIVES.

The board shall grant a hearing to any person who shall feel aggrieved by any order or directive of the board, upon application filed within fifteen (15) days from receipt thereof. At such hearing the petitioner may appear, present witnesses and submit evidence. Following such hearing the board shall make its order or directive and, unless appeal is taken therefrom as hereinafter provided, the same shall be final and conclusive. Such order or directive shall be subject to review and trial de novo as a cause in equity upon petition filled within fifteen (15) days of the issuance of such order or directive. in the circuit court of the county of Brevard. Except in case of an emergency affecting the public health, any order or directive shall be stayed pending the hearing before the board, and, in case of appeal, pending final determination of the matter by the court. Any order or directive shall be subject to modification or revision by the board upon the petition of any party adversely affected thereby. (Sp. Acts, Ch. 59-1119, S. 12).

STUDENT COMMENT NO. 3

Lake Washington Dam Still 4 Years in Future

By WAYNE EZELL
Assistant Metro Editor

Construction of a large dam on Lake Washington, considered the solution to an impending water crisis in South Brevard, is at least four years away, state officials said Wednesday.

An ecology study, called for by the Environmental Protection Agency, is primarily responsible for much of the long wait, according to Jack Maloy, assistant director to the Central and Southern Florida Flood Control District.

The EPA will be asked to overlook the environmental hazards of the dam when local officials meet with EPA representatives and Rep. Lou Frey Jan. 28, County Commissioner Hugh Evans said.

Also needing to be overlooked is the environmental effects of activating the Jane Green Reservoir west of Melbourne which is nearly complete and only needs to be closed off to hold water.

If closed, the giant reservoir would supply water to replenish Lake Washington during drought periods, Maloy said.

Gen. Harry Sands, FCD board member from Melbourne, said though trees would be killed along with deer, quail and other game, eliminating hunting in the area, it all would be replaced by a giant lake good for fishing.

But an FCD biologist surprised Sands and several officials when he said it may be harmful to the environment if the reservoir were activated.

"We just don't know," said biologist Walt Dineen when he was asked how much harm would come from opening the reservoir.

The dam is part of a giant water management project by FCD involving the entire upper St. Johns River basin. The project was stopped a year ago until EPA can study the environmental effects of the dams and reservoirs.

South Brevard is expected to benefit greatly from the dam, the Jane Green Reservoir and another reservoir south of Melbourne, because when completed they will help maintain the water level in Lake Washington above 17 feet.

The lake, now standing at about 13 feet, usually drops to dangerously low levels during the summer drought season and salt intrusion becomes a serious problem.

Melbourne City Councilman Ed Von Nordeck cautioned ecologists should be concerned about a "people kill" for lack of water unless action is stepped up to activate the reservoir and build the dam.

A severe drought would lower the lake's level to the point there is so much salt intrusion, the water is impossible to treat, said Fred Derry, city water superintendent.

A city-owned dam, recently repaired with sandbags, now helps maintain the lake's level, but the city's dam is considered to be only a temporary solution to the problem.

About 10 million gallons of water is pumped daily from the lake for use by about [illegible]00,000 south county residents.

STUDENT COMMENT NO. 4

Lake Session Scheduled Jan. 28

By **DAVE THOMPSON**
TODAY Staff Writer

U.S. Rep. Lou Frey will chair a meeting Jan. 28 in Melbourne as city and county officials attempt to clear a path for completion of a permanent Lake Washington dam, District 5 County Commissioner Hugh Evans said Tuesday.

Federal Environmental Protection Agency (EPA) officials have placed a moratorium on construction of a large dam at Lake Washington planned by the Central and Southern Florida Flood Control District (FCD) and have also blocked plans to close the Jane Green Reservoir west of Melbourne, Evans said.

Paul Traina, acting director of the EPA water programs branch, and John Wakefield, EPA program adviser from Tallahassee, will be present along with Frey at the 2:30 p.m. meeting at Melbourne City Hall.

"We will try to get them to lift this moratorium somewhat, especially as it applies to the Lake Washington dam," Evans said. "It's just the simple fact that we need water next summer. We'll have conservation groups and city o Melbourne groups present and the public is invited."

During a meeting last Wednesday in Melbourne, state officials said construction of a permanent Lake Washington dam was at least four years away. The dam, part of a water management project by the FCD involving the whole upper St. Johns River basin, was stopped a year ago until the EPA can study the environmental effects of the dam and reservoirs.

Water often leaks from the makeshift dam the city of Melbourne currently has at the lake. The lake, now at a depth of 13 feet, sometimes sinks to dangerously low levels during the summer and salt intrusion becomes a serious problem.

During a severe drought, there would be so much salt intrusion that the lake's water would be impossible to treat, City Water Superintendent Fred Derry says.

About 10 million gallons of water is pumped daily from the lake for use by about 100,000 south county residents.

County Acts To Provide More Water

By WAYNE EZELL
TODAY Staff Writer

Ecology experts will be asked to overlook the environmental dangers of flooding Lake Washington during an expected drought next summer in order to provide South Brevard residents with adequate drinking water, city and county officials decided Wednesday.

The flooding will be a stopgap measure necessary because 17-year-old plans for a dam to be built by the Central and Southern Florida Flood Control District have not materialized.

The Environmental Protection Agency will be asked to grant permission to flood the lake from storage water available to the south and west, but now restricted from being used until ecology studies are complete.

County commissioners Hugh Evans and Val Steele met with city officials and Gen. Harry Sands, FCD board member, to map strategy to have the dam project speeded up.

"We need a scream from the bulk of the people to get the project off of dead center," Gen. Sands said. He said the planned dam will have to be redesigned to meet present FCD standards and objectives.

The project, expected to cost about $4 million, would be completed north of the lake on the St. Johns River. Environmental studies for the project are expected to take more than a year.

Lake Washington, South Brevard's primary water supply, is expected to drop to a level where salt intrusion becomes a serious problem next summer unless the flooding is made possible, said Fred Derry, Melbourne water superintendent.

A city-owned dam north of the lake helps keep the level up, but its effectiveness is not great enough during drought conditions, he said.

STUDENT COMMENT NO. 6

Reservoir Ban Can Be Lifted, EPA Official Tells Melbourne

By **WAYNE EZELL**
Assistant Metro Editor

An impending Melbourne "water crisis" moved a giant step toward being solved Friday when Environmental Protection Agency officials said a ban on using a nearly complete reservoir can probably be lifted with a letter.

But the Central and Southern Florida Flood Control District will have to wait until EPA completes an ecology study before it will be able to resume work on the upper St. Johns River project, including a large $4 million dam on Lake Washington.

The lake supplies between eight and 10 million gallons of water daily to South Brevard residents and city officials have feared its supply will go to a dangerously low level this summer.

The Jane Green Reservoir southwest of the lake will be used to store an emergency supply of water that can be used to flood the lake during dry periods.

In conjunction with the reservoir the city plans to either beef up the leaking makeshift dam north of the lake or construct a new one, possibly with the help of state funds, City Manager Earl Watkins said.

"I see no problem at this point with closing the reservoir," said Paul Traina, acting director of EPA water programs. He said the ban on closing off the reservoir was due to a misunderstanding between EPA and the Corps of Engineers.

The ban on continued construction of other areas of the giant project, including the FCD dam north of Lake Washington, still stands, he said.

A meeting chaired by U.S. Rep. Lou Frey had been in session for two hours Friday afternoon when John Wakefield, state EPA program adviser, suggested closing off the reservoir as the best way to insure an adequate water supply.

Six Melbourne councilmen quickly voiced approval of the plan.

Their support apparently put a damper on plans by FCD officials to solve the water problem with a multi-million-dollar project which they hoped to have speeded up by bypassing the ecology study.

FCD officials plugged hard for EPA to forget the ecology study of the dam project.

"I'd be afraid to stop this project . . . what we're facing is the possibility of a disastrous flood," said Gen. Harry Sands, FCD board member.

He said the giant project will help alleviate both drought and flood conditions.

Some ecology and conservation groups objected to closing off the reservoir, including David Cox, a state Game and Fresh Water Fish Commission biologist, who said the water quality in the reservoir might not be good enough for city use.

STUDENT COMMENT NO. 7

2 Beach Cities Probing Joint Sanitation

By KEVIN MOORE
TODAY Staff Writer

Cocoa Beach and Cape Canaveral officials are moving ahead with a $2,000 study to determine the feasibility of creating a sanitation department to be run jointly by the two cties.

The study, by a West Palm Beach firm, will estimate operating costs and project routes, equipment needs, labor force requirements and other details of a full fledged sanitation department.

The Cocoa Beach Commission unanimously approved paying two thirds the cost of the study last week. Cape Canaveral's City Council has given an unofficial go-ahead, and is expected to approve its one third of the cost at its meeting next Tuesday.

The study is expected to be completed by Feb. 21, according to Cocoa Beach City Manager Tom Sprowl. Cocoa Beach's current garbage contract expires in June and Cape Canaveral's later this year.

Labor cost and recruitment will be a major problem in the proposal, Sprowl and Cape Canaveral City Manager Bert Francis agree.

One possibility the study will investigate is keeping the equpment in Cocoa, the most probable labor source, and bringing it over daily for garbage collection. The two cities will also consider a lease-back arrangement whereby one city, probably the larger Cocoa Beach, would own and maintain the equipment, while Cape Canaveral, in effect, leases part of it for daily collection rounds.

Neither city is overjoyed about creating a new department "with all its headaches," said Cocoa Beach Mayor Robert Murkshe, but he estimated the city's $2.02 a month rate for household garbage removal may rise close to Merritt Island's $3.50 a home average when the current contract expires.

Cape Canaveral's average household cost is closer to $3 a month, Francis reported, adding that the cost had reached the point where it might be cheaper for the cities to do the work themselves than use a private contractor.

STUDENT COMMENT NO. 8

County Starts Negotiations On Sewers

By LARRY TWIEHAUS
TODAY Staff Writer

The Brevard County Commission has initiated negotiation with Cocoa Beach to provide sewer service for residents living in unincorporated areas north and south of the city.

The board set March 2 as the day it will determine whether or not to proceed with the $782,000 proposed sanitary sewer project which would serve about 555 potential customers.

The two unincorporated areas affected by the proposed project would be 140 acres of land between the city of Cape Canaveral and Cocoa Beach and 216 acres of land between Cocoa Beach and Patrick AFB.

According to Thomas Groover of Brevard Engineering Co. who presented a feasibility study to commissioners Thursday afternoon, "an emergency situation exists in the two areas because septic tank usage has constituted a health hazard."

The project financing would be accomplished through the sale of revenue bonds and by a special assessment of $6 per foot which would be levied on all property.

The report recommends a rate schedule be adopted by the county charging customers $5.50 as a minimum monthly bill for those living in single family units, and a minimum of $3.50 a month for customers living in apartments, motels and trailer parks.

Groover said the average monthly bill for sewer customers in the two areas would probably amount to $7.44, compared to the average monthly bill for Cocoa Beach residents of between $6 and $7.15.

"It has become apparent in this area that the population densities have become or are rapidly approaching the point where spetic tank . . . disposal is becoming grossly inadequate to provide the proper protection of the public health," the report said.

"A public water supply system exists in the areas and this adds to the pollution problem because of the greater water usage from public sources than from private well sources.

"The pollution in these two beach areas is mainly one of surface water pollution, and especially of the Banana River through pollution of the underground water which can and will seep into the river and the surface runoff after rain storms."

The recommended projects for the combined area north and south of Cocoa Beach consist of collection systems to serve the developed portions of both areas and flowing to points of connection to the Cocoa Beach system, the report said.

"From the connection points the sewage wastes will be conveyed through the Cocoa Beach system to the Cocoa Beach sewage treatment plant."

Groover added a "tenative agreement" has been reached with Cocoa Beach officials who agree with the basics of the proposed project.

Once sewer lines are constructed, work could begin on the paving of streets and the construction of storm drainage in both areas, Groover said.

"The ones without septic tank problems could care less about this project, but they definitely want paved roads and storm drainage," Commission Chairman Lori Wilson said.

Commissioner Wilson pressed the board to take action Thursday so the project can get under way. "This thing has been in limbo for too many years," she said.

Other commission members said they would rather "digest the feasibility report and make a decision on the project at the March 2 meeting.

After considerable discussion, Mrs. Louise Russell, president of the Cape Kennedy Area League of Women Voters, criticized commissioners for not taking immediate action.

STUDENT COMMENT No. 9 : Government Cooperation

In unincorporated county areas north and south of the City of Cocoa Beach septic tanks have been allowed. Because of the increased use of these septic tanks, Brevard County studied the necessity of including these areas in a sanitary sewage project. The conclusions and recommendations of that study are listed below:

CONCLUSIONS

Predicated upon our study of the unincorporated areas north and south of the City of Cocoa Beach, with respect to the necessity and feasibility of a sanitary sewerage project, it can be concluded that:

1. The development in the two unincorporated areas, north and south of the City of Cocoa Beach, has reached the point where the continued use of septic tanks and drain fields constitute a health hazard.

2. The installation of drainage facilities in the northern areas, although vitally necessary, will not reduce the health hazard; but will transfer a portion of the pollution problem from the properties in the area to the Banana River.

3. The Provision of sanitary sewerage facilities, with adequate sewage treatment and effluent disposal, is necessary as a safeguard to public health.

4. It is not reasonable to construct and operate separate sewage treatment facilities for these and such should be considered only as a last-resort measure.

5. Negotiations with the City of Cocoa Beach, for the operations of the system and the receiving, transporting and treating of the wastes, should be finalized.

6. The proposed sanitary sewerage systems to serve the unincorporated areas north and south of Cocoa Beach is financially feasible.

RECOMMENDATIONS

In keeping with the foregoing Conclusions, it is recommended that:

1. The Board of County Commissioners proceed with the legal requirements set forth in the enabling legislation to create one (1) sanitary district to encompass the two (2) unincorporated areas north and south of Cocoa Beach.

2. The boundaries of the District should be:

Northern Section - The Corporate Limits of the City of Cape Canaveral, existing at the time of the creation of the District; the mean high water line of the Atlantic Ocean; the Corporate Limits of the City of Cocoa Beach, existing at the time of creation of the District; and the mean high water line of the Banana River.

Southern Section - The Corporate Limits of the City of Cocoa Beach, existing at the time of the creation of the District; the mean high water line of the Atlantic Ocean; the Boundary Line of Patrick Air Force Base; and the mean high water line of the Banana River.

3. The County Attorney and other County Officials be directed to proceed with negotiations and the preparation of a contract between Brevard County and the City of Cocoa Beach for services to the Sanitary District.

4. The County Attorney and Financial Advisor be directed to proceed with the preparation of the financing plan for the financing of the proposed Project and the necessary steps to prepare the Revenue Certificate Issue for validation and sale.

5. The Engineers be directed to proceed with the preparation of Drawings and Specifications for the construction of the recommended facilities.

STUDENT COMMENT NO. 10 : Three Major Legal Theories Frequently Used in Pollution Cases

1. NEGLIGENCE:

The concept of negligence is the concept of carelessness: that the person or persons being sued deviated from the standard of care the law declares that they owed the plaintiff (person suing), and therefore are responsible for the injuries sustained by virtue of that deviation.

2. TRESPASS:

Trespass creates liability for damages following the entrance onto the land of another. It is not necessary that a person enter upon the land; a thing may. It must be shown that the defendant (person being sued) deliberately or intentionally caused the entry onto the plaintiff's land. The concept of "land" is not just literally one's earth, but all of his property, including his person, and including the air space over his land (up to a point).

3. NUISANCE:

Nuisance is unreasonable interference with the interest a person has in the enjoyment of property. There are two major kinds of nuisance cases.

1. Private Nuisance: Only the person whose property rights have been interfered with may sue.
2. Public Nuisance: Damage has been done to the public generally. Thus it is up to the public (the city or whatever) to sue or correct the nuisance. A private person may sue for the commission of a public nuisance only if he suffers special damage, that is, more than suffered by the public generally.

STUDENT COMMENT NO. 11 : Administrative Remedies First

Can an individual citizen, or group of citizens, mount effective resistance to an industrial concern which is polluting the environment? The answer is "yes," provided the citizen is well-informed on the governmental processes involved. He should have foreknowledge of the various defenses the polluter may be expected to prepare, especially a defense referred to as "exhaustion of administrative remedies." This refers to the failure of the plaintiff (citizen) to follow proper administrative channels BEFORE undertaking legal action. It is commonly raised as a defense when the citizen files an immediate lawsuit against the polluter. In other words, the citizen must appeal first to appropriate administrative departments or agencies within the government, before entering the judicial stage.

Suppose, for example, that a citizen discovers a source of radiation exposure in the community. Local law may require the citizen first to register a complaint directly with the Board of Health. This agency, in turn, may be empowered to investigate, report and act upon the situation, serving, in effect, both executive and judicial functions. If dissatisfied with the settlement provided by the Board of Health the citizen may be directed next to a Board of Appeals. If the citizen tried to take the case directly to court, the polluter could be expected to set up administrative exhaustion as a defense.

Where government agencies are efficient, the administrative route is the best to follow. If, however, the process entails lengthy delays (as is sometimes the case), the citizen may find himself "helpless" before a continuing source of pollution.. In this event, he has two recourses. He may bypass the bogged-down administrative agency and sue the polluter directly--expecting, of course, a defense of administrative exhaustion. However, there is some precedent for direct court action before administrative remedies have been exhausted, particularly where immediate damages are involved. Secondly, the citizen may sue the government itself to compel it to act.

STUDENT COMMENT NO. 12 : See Your Local Attorney

Citizens have the right to file a lawsuit against polluters. They may, if they wish, conduct the suit themselves. However, citizens who attempt to do so are not likely to succeed, due to the multitude of procedural requirements involved in maintaining a lawsuit. The best course of legal action for the average citizen who wishes to protect the environment is simple: Hire a lawyer.

In consulting with a local attorney, the citizen should be able first to identify clearly the pollution problem, and also present evidence which justifies the potential lawsuit. If a group of persons desires to bring suit, the first action suggested by a lawyer is often to incorporate the group under a title such as "Citizens for Clear Air, Inc.," or "Committee to Preserve the Indian River." Among the advantages to corporate status are an enhanced standing in the eyes of the court and an increased ability to bear legal costs.

In selecting an attorney, the citizen has several possibilities. The best place to begin is often by consulting with the family lawyer, who may decide either to take the case himself or refer his client to an attorney who specializes in environmental affairs. Lacking such a preliminary legal contact, the plaintiff could check with his friends for the name of a lawyer who might take such a case, or he could contact the local legal aid society or bar association service. The town attorney could also offer assistance. Newspapers often carry stories about lawyers who have filed lawsuits against polluters or have been speaking out against pollution. Such lawyers are often guest speakers at meetings concerning pollution.

After the lawyer is located, a significant problem remains. Legal counsel is expensive. Most lawyers charge between $25 and $50 per hour, unless they are retained on a contingent fee basis whereby the lawyer agrees to work for a specified percentage of the damages received if the case is won. Under the contingency plan, if nothing is recovered, the lawyer receives no legal fee. The contingency payment is well-suited to a pollution case which involves a probable payment of damages, as when a client develops a lung condition as a direct result of traceable air pollution. If the lawyer feels he has a good chance of winning substantial damages, he is apt to accept a contingent fee.

If, on the other hand, the suit is designed not to win damages but merely to stop the pollution (by abatement or injunction), the only appropriate means of payment is on an hourly basis. This is likely to be prohibitively expensive for the average citizen. There are several possible solutions to this financial problem. One is for the plaintiff to seek a fund which will pay the lawyer, or find a conservation group which is willing to join in the suit. There are also special legal groups which will either bring suit themselves in behalf of the citizen-plaintiff or assist local attorneys in so doing. Examples of such organizations are the Sierra Club, the National Audubon Society and the National Parks and Recreation Society. However, such groups are of necessity selective in the cases they will assume.

Funds may also be solicited from property owners who stand to benefit from a stoppage of pollution. In a case where the purification of a stream would upgrade the value of adjacent property, for example, the citizen who files suit might legitimately be able to enlist the support of the property owners involved. Another financial avenue open to the citizen is to seek a lawyer who is committed to fighting pollution who will donate his services. There are lawyers, especially young lawyers anxious to gain courtroom experience, who will accept pollution cases as a challenge, without reimbursement beyond the actual costs of the litigation -- filing fees, taking depositions, copying documents, etc.. These costs, of course, the plaintiff must be prepared to assume. Another possible means of funding legal aid is to interest a lawyer in seeking punitive damages. Punitive damages are awarded in a case where actual damage is slight but the polluter is found guilty of grossly wanton conduct. They are often substantial. If a citizen has evidence which seems sufficient to warrant the assessment of punitive damages against the polluter, he may be able to persuade a lawyer to operate on a contingent fee basis, even if the actual damages sought are inadequate to defray legal costs.

The citizen who brings suit against a polluter may be able to fund his legal proceedings by recovering a reward for information concerning polluters. A final possibility for financing legal action is to undertake what is known as a class action, a procedural device which allows a large number of persons to sue simultaneously. This method is especially useful when each individual has incurred only slight damages but the collective damage is significant, as in the inhalation of vapors from a factory. A lawyer who represents 10,000 persons, each with a $1,000 damage suit, is then suing for $10,000,000. In such cases there should be no difficulty locating an attorney who is willing to work on a contingency basis!

STUDENT COMMENT NO. 13

'ECOLOGICAL CRIMINALS'

Court Sets 'Pollution' Docket

LOUISVILLE, Ky. (AP) — Louisville residents who are careless about pollution are finding themselves faced with charges in a new kind of court established to prosecute what a judge calls "ecological criminals."

Judge Glenn McDonald of the Jefferson Quarterly Court Criminal Division has set aside every Friday afternoon for cases on pollution and ecology.

He described the sessions as "a court of public awareness," adding, "This court is for the people — to make the legislature aware of the need to enact new laws."

When the court was established five months ago, most of the cases were brought by either the Air Pollution Control Board or the Board of Health.

"We got more complaints on the telephone than actual," McDonald said. "People just don't seem to want to get involved."

Lately, however, ordinary citizens have gotten into the act, filing suits against individuals, groups or companies they think are polluters.

To bring suit against a polluter, a citizen must obtain a summons at the County Clerk's office, name the violator, the alleged violation, and provide his own name. Within four to six weeks, plaintiff and defendant are summoned to court. Fines have averaged from $10 to several hundred dollars in the non-jury cases.

There are few laws under which laymen can prosecute ecology cases in Kentucky, McDonald said. The strongest, he said, is the highway littering statute, which prohibits roadside dumping of trash.

Last Friday defendants included a man taken to court by his neighbors for dumping garbage in the street instead of paying a $3 dumping fine in his subdivision. The man was found guilty and fined $300 for littering.

Among other littering cases McDonald has heard was one in which a man moving furniture from one apartment to another dumped some of it along a Louisville roadway. A person who saw the illegal dumping brought suit and the man was found guilty.

Other cases may be prosecuted under a public nuisance statute, which covers violations on private property.

TEACHER COMMENTS

TEACHER COMMENT NO. 1 : Participation Evaluation

The following checklist is offered as an example of a device which may be used to lend a degree of objectivity to evaluating student participation in class discussions. The teacher may involve students in the evaluative process by devising a rotation system whereby two or three students would evaluate class members during class discussion periods.

Only four simple catagories are employed in this checklist. More complex scaling may be included if the teacher wishes to discriminate among cognitive skills of the students,(i. e. recall, synthesis, analysis, etc.). However, this type of scale is not easily employed. The following catagories for evaluation are included in this suggested checklist:

1. Quantity of student contribution.
2. Content of student's remarks as these indicate knowledge of topic, critical and/or innovative thinking by student.
3. Relevance of student's remarks to subject under consideration.
4. Clarity of expression and presentation by student.

The evaluator may indicate quantity of student's remarks by simply placing a check in the appropriate column. The other categories should be rated on the following qualitative scale of 1-4.

1 - Poor (incorrect and/or inappropriate)
2 - Fair
3 - Good
4 - Excellent (complete and appropriate)

The following chart may be adapted for use in the evaluation described above. Simply record student's name when he initially participates and continue evaluation of any of his subsequent comments on same line. There is no need to record the student's name until the point of initial contribution.

NAME	QUANTITY	CONTENT	RELEVANCE	CLARITY
1. Sam Sunshine		3, 1, 2	4, 1, 3	3, 3, 3
2.				
3.				

TEACHER COMMENT NO. 2

Editorials TODAY

Robert Bentley
Editor

Ed Frank
News Editor

Buddy Baker
Managing Editor

Nick White
Editorial Page Editor

Air Quality Insurance

Florida's Department of Pollution Control recently held public hearings on the quality of air in our state.

Florida has less of a problem in this area than many states, which makes it even more important that we not let the quality we enjoy degrade in any manner. Much of the state, for example, already exceeds federal standards, a status which should encourage us to adopt tougher-than-federal requirements for clean air.

Brevard County is a good example. The only obvious polluters of the air in Brevard are the two power plants on the Indian River, a small asphalt plant and automobiles. Because of our exposure to ocean breezes, the air is clear most of the time.

But that's no reason to take it for granted. Power plants do pollute, despite the fact that modern technology is available which could bring emissions under control. As the area grows this will become even more of a problem, if we let it.

Automobiles are another problem. Exhaust isn't a big problem here, not now, but it can be someday. That's why we need tough exhaust control laws such as those in effect in California. We need them now, not after the problem becomes obvious.

The Environmental Information Center of the Florida Conservation Foundation takes a tough stand on Florida's air quality, and we think they are right. Among the recommendations they support are the following:

- The Department of Pollution Control should expand its authority in testing and inspection of automobile emissions.
- Land use control should be used when necessary to control air pollution.
- Florida's varied environmental programs should be coordinated closely on a state level.
- After the 1975 air quality standards are met, the standards should be reevaluated to make sure they are sufficient.
- The department should insist on development of a statewide urban transit system to make air quality standards possible.
- No area of the state should be allowed to degrade its air quality, even though it might be better than the law now requires.
- The department staff needs expansion, and the enforcement arm should be decentralized for more effectiveness.
- Current traffic patterns in downtown Tampa, the worst polluted city in Florida, should be altered to enforce the required air standards.
- The department should make long-ranged plans for Florida air quality, taking into account the need for transportation and power.

You will hear grumbles about the department as it is now set up, and loud complaints about some of the above proposals to strengthen the department.

Technicalities aside, we are talking about the quality of the air we breathe, and what our children and their children will face within the future.

Just because things aren't too bad now is no reason to sit back and relax. Even Birmingham, Ala., used to have clean air.

TEACHER COMMENT NO. 3

McLouth Asks for Study

'Don't Kill Off Our Scallop Industry'

By JOE CRANKSHAW
Brevard Bureau Chief

PORT CANAVERAL — "We need to be farmers of the sea, not merely fishers of the sea," said Malcolm McLouth, vice chairman of the Canaveral Port Authority Saturday. "We need to be sure we don't kill off our scallop industry."

McLouth is trying to get industry, science, government and the community together on a program to study the life cycle of the Calico scallop, which has been discovered in abundance some 20 miles off Cape Kennedy.

But his efforts, while attracting interest, aren't stirring much enthusiasm in the Port Authority or other local government agencies which would have to support the study.

"**PEOPLE FROM** North Carolina are already here fishing our waters," said McLouth. "More people are cming. The sea freeze Atlantic is coming. If we all don't work together on this thing, the Russians, Japanese, the whole world will be offshore rooting up our ocean floor and making off with the scallops."

McLouth wants the port authority, the industry and the state and local governments to finance a study of the Calico scallops' life cycle through Hydrospace Technical Institute.

And he wants the federal government to declare the scallop a creature of the continental shelf, which would limit its exploitation by any but American fishermen.

CREATURES OF the continental shelf are those sea creatures which must stay in contact with the underwater land and are reserved to the nation bordering the shelf at that point. A wide variety of species is concerned.

The federal government has already invoked the terms of the Bartlett Act, covering continental shelf creatures, and McLouth wants scallops included.

"We are going out there and dropping a dredge down into we don't know what. We don't know what the effect of our actions is and we don't know if we are doing anything right. We are just exploiting our scallops."

PIERRE DALLEMAGNE, chief oceanographer at HTI, has made a study of the project and has reached some tentative conclusions but more study needs to be done he said. The work has been done under a contract from the federal government.

Commercial scallops have been found 20 miles at sea, but adult scallop shells, in piles four or five feet deep, have been found north of the Cape.

"This may indicate that the adults come in and breed and die and that the young go out and grow up and then migrate in," explained McLouth. "This may mean that there are periods when we ought to prevent scallop fishing or modify it."

McLOUTH NOTED that the scallop fishing may also be hurting the smaller, less lucrative red snapper fishing industry and that something ought to be done to protect that industry as well.

"We are dealing with an industry that is potentially worth millions of dollars a year. Why can't we spend a few thousand dollars to make sure we don't wipe it out in 10 years?"

McLouth said that industry representatives are willing to discuss the problem and that action must now come from the Port and other government agencies.

TEACHER COMMENT NO. 4

Editorials TODAY

Robert Bentley
Editor

Buddy Baker
Managing Editor

Ed Frank
News Editor

Nick White
Editorial Page Editor

Wrecking the Landscape

The high dirt banks along some of Brevard's roads and the sand dunes in many of our wilderness areas have taken on a different appearance during the past year or so from the natural look that had existed for hundreds of years. Many of them are now defaced with ruts and have badly eroded crests.

This is not a natural erosion caused by water or wind. It is a man-made erosion caused by the recent popularity of the "sport" ow dune buggies and other "off-the-road" types of vehicles, including some motorcycle riders.

These sand dune riders get their kicks from the wild ride and challenge of their motorized sport. It is not their intent to injure the land and destroy the beauty of the countryside for others. But this is nevertheless an unfortunate byproduct of their sport.

We generally take a liberal attitude toward any activity that is enjoyed by it's practitioners, as long as it doesn't harm or endanger other members of society.

Although the dune buggie may not offer a direct threat to the health or safety of the public, it does seem a threat to the general welfare in some abstract ways. For the few minutes of pleasure it affords a dune buggy pilot, it leaves an enduring scar on the land that cheats others of the natural beauty of nature. And there may also be some more concrete objections — at least in some beach areas.

"There's no question that they do cause environmental damage," says Rep. A. H. "Gus" Craig, D-St. Augustine, chairman of the House Natural Resources Committee. "As time goes on and you keep getting more of them (dune buggies, etc.) you're going to have to find some place to put these people. I don't think you can do away with them. You have to realize that they're here to stay, but you have to keep it from getting completely out of hand," he said.

Craig's committee will be holding hearings soon on a couple of bills designed to protect the peace and integrity of the great outdoors. One is a bill by Rep. Bill Fulford, D-Orlando, to regulate air boats, and the other is a bill by Rep. Don Tucker, D-Tallahassee, to ban dune buggies from most beaches.

State Recreation and Parks Director Ney Landrum says the problem of dune buggies "is bad enough so that we're trying to take some steps to get it under control.'

We agree that some limits and controls should be placed on the indiscriminate use of off-the-road vehicles before our state suffers very much more needless destruction. Restrictions were placed on halftracks and other swamp rigs in game management areas not long ago. These should be expanded and extended to cover other damaging vehicles and lands outside game management areas.

Perhaps there could be some specified areas around the state where this type of activity could be allowed.

We hate to see more and more restrictions placed on the public, but the thoughtless abuse by some dune buggy drivers makes such action seem necessary.

TEACHER COMMENT NO. 5

46.

Legislation Needed To Protect Beach

By JACQUELINE LOGAN
Melbourne Beach

Are the good citizens of Melbourne and Melbourne Beach, going to do anything to preserve this unique asset — the beach?

It doesn't cost money to assess the possible benefits and the harm which could occur along the shore from Spessard Holland Park to the county line.

Protective legislation is badly needed.

A wise and dedicated sheriff and a hard working marine patrol can not be effective without legislation to back them up.

Picnic fires on the beach, fanned by an unpredictable breeze, could cause a conflagration. Most of us are disgusted at seeing exhibitionist teenagers cavorting nude, on this public beach. Vandalism and thievery are not unusual, the litter continues. Some of it washed ashore by the tide. Beach dwellers clean up.

Now that the turtle season is over, beach buggies and motorcycles cruise the beach until one and two in the morning. They have already caused noticeable erosion. Some turtle nests will never disgorge their baby turtles. Constant buggy traffic over these areas, can permanently bury the eggs.

Any judgment on the harm caused by dune buggies, should be based on a geological and marine-biological report.

South Melbourne Beach is a bit narrow but it slopes gently into the sea. The land abbutting the beach is high, not flat, as it is in Vero. Here, motorcycles and buggies have torn down the bluff for easy access. All access roads to the beach should have the opinion of a geologist, to avoid erosion. Beaches north and south of Melbourne have high rise apartments and motels.

A two-story limit on beach building would preserve its beauty.

With the advent of Disney interests, any legislation should take into account the incursion of more buggies and more people. Ocean to bluff, "wall to wall" motor traffic would not be conducive to pleasant fishing, surfing and sun bathing. It would be a hazard for children.

Any beach buggy traffic causes a certain amount of erosion. This is the opinion of three accredited geology professors, two of whom are also marine biologists. They are Dr. Webster of FIT, Dr. Dubbleday, FIT and Dr. Robert Perry of the University of Mass. A more detailed study would cost time and money.

Any legislation should be drawn to cope with the type of difficulties which California experienced. The approaches to Disneyland became a shambles. Enormous advertizing signs, hawkers with trucks and pushcarts, campers beside the road. Let us hope for legislation to cope with every eventuality.

Young Ecologists Bugging Melbourne

By **ED BERND JR.**

Sentinel Staff

MELBOURNE — A group of junior high students who are concerned about ecology are beginning to bug Melbourne City officials.

The youngsters, taking an ecology class to learn what's what about pollution, are circulating petitions to schools throughout the area to try to get Melbourne to deal with firms that recycle waste paper and other resources in garbage.

THE CITY HAS reacted immediately, charging that the firms that advertise they recycle paper have not been doing so in the past, and that the cost of garbage collection for homeowners will go up if the city loses its large, commercial "gravy accounts."

"It is not a matter of ecology, it is a matter of economics," Mayor Milton McGrath said.

"Maybe the kids have really struck a nerve," Dr. Clair Bemis, head of the ecology program for the coujty school system said.

"I WILL NEITHER encourage nor supress this sort of thing," Bemis said. "Our aim is to teach them the facts about ecology, so that they will know what they are talking about and not just take an emotional approach."

Students in Titusville were successful in getting action from city council, Bemis said.

"They petitioned the city council to clean up the old truck dumping grounds—and they did," he said.

WHEN RESIDENTS of the Imperial Estates section of Titusville asked the city to clean up the area, the ecology students went out and did the job. Then they put up signs to encourage people to keep it clean Bemis said.

"We anticipated we would start this program small," he said. "We planned to have two or three classes in each school."

Titusville High ended up with 13 classes, and there are 67 throughout the county.

SOME 2,999 students have enrolled. "The response is overwhelming," he said. "These youngsters are really enthusiastic about it."

So enthusiastic, that Melbourne officials are already up in arms defending their exclusive franchise policy on garbage collection.

The garbage recycling problem—letting specialized firms come in and pick up certain types of products—is probably going to become a county wide problem.

Youth Heeds Warnings

"A little child shall lead them," the Bible intones. But the Bible doesn't say that it will be easy.

Melbourne junior high school pupils are learning that hard lesson on their ecology class. The youngsters have been urging the city fathers to deal with companies that recycle waste paper and to permit collections of bottles, cans and other materials that can be reprocessed to prevent litter and to save our precious resources.

But so far Melbourne City Council has scorned such a course of action.

Why? Well, believe it or not, Mayor Milton McGrath tries to defend council's action — or inaction — on the grounds that ecology is bad business. "It is not a matter of ecology, it is a matter of economics," the city's highest official states.

The mayor bases his argument on the fact that the city's garbage-collection franchisee would "suffer" as a result of the refuse siphoned off for recycling. Thus, Mayor McGrath asserts, homeowners would face higher collection rates.

We think this smacks of false economy. Just because wood grows on trees doesn't mean this nation can afford to waste it. And there are limits to our metal resources and even more stringent curbs on our waste-disposal facilities.

As the Brevard County Commission is learning, there are few places where you can locate a new sanitary landfill (dump) — or even a modern incinerator. Waste disposal and ecology problems are going to become more and more important; they can hardly diminish.

Fortunately, the younger generation is heeding the warnings of conservationists that we must begin husbanding these irreplaceable resources.

As witness to this, some 2,000 students in county high schools and junior high schools have enrolled in a total of 67 ecology classes. And they're not just sitting there reading textbooks.

They're collecting old newspapers. They're cleaning up roadsides, parks and other public places. They're gathering cans and bottles for recycling. And perhaps even more important, they're encouraging adults to adopt good practices.

In Titusville, points out Dr. Clair Bemis, head of the Brevard County School District's ecology program, the students petitioned Titusville to clean up its old dumping ground, and the council had it done. In addition, the students themselves cleaned up a section of the city—and then put up signs to encourage all citizens to keep it clean.

We salute all 2,000 of these young conservationists — and urge all of the county's adults (especially the responsible political officials) to follow their lead.

TEACHER COMMENT NO. 8

Waste Paper Recycling To Be Studied

By AL MARSH

TODAY Staff Writer

Melbourne City Manager Earl Watkins has been directed to "look into" the possibility of recycling the city's clean waste paper, rather than dumping it in a sanitary landfill.

The directive from Councilman Ed Von Nordeck came during a discussion Tuesday in which Watkins admitted the city refused occupational licenses to trucking firms which were carrying the paper out of town to be recycled.

"Shouldn't we get into the recycling business," Von Nordeck asked.

Watkins countered the city is in the trash business now.

"No we're not. We're taking it to a landfill and letting it rot where it stays for 150 years," said Von Nordeck.

Councilman Bill Clark said recycling operations would be too expensive and added, "It would be like putting on a second set of trash trucks."

Watkins admitted the city refused licenses to firms hauling paper to Rockledge Paper Stock, Inc., where it is baled and sent to paper mills in Jacksonville and Mobile, Ala., among others.

Food Fair official Bill Cook said in Jacksonville Wednesday his company was "making plans" to recycle paper from their Pantry Pride store in Melbourne when the trucking firm hired to haul the paper to Rockledge was ordered out of the city.

At the time the Rockledge firm was preparing paper for recycling from three Melbourne stores — Zayre Department Store, Penney's and Sears — and was preparing to do the same for Pantry Pride as soon as the store worked out procedures for separating wet and dry trash, said official Jim McMeanamy of the paper firm.

The Food Fair chain advertises its recycling policy on television and recycles dry waste paper such as cardboard boxes from "100 percent of our stores in Jacksonville" and "100 percent of our stores in the city proper of Orlando," said Cook.

Food Fair also recycles paper from its stores in Cocoa Beach, Satellite Beach and Merritt Island.

TEACHER COMMENT NO. 9

City Referendum On Recycling Paper Opposed

By JACKIE REID
Times Staff Writer

MELBOURNE — Most city officials are looking with disapproval at all proposals to allow private waste-recycling projects, especially one calling for a referendum on the ecology issue on the November ballot

City Councilman Robert McKemy, however, favors the idea.

A suggestion for a waste paper recycling program to be added to the ballot as a referendum item is being made by a Central Junior High School ecology teacher.

Mrs. Joyce Hancock and 130 students in her four classes on ecology are requesting to be heard by the city council at its next regular meeting Sept. 28.

"It would have to be a straw ballot if it were included in the November elections," City Manager Earl Watkins said today. "The city would have to gather a lot of information before Nov. 2 about the details and cost estimates involved in such a program, and I believe there isn't enough time to do that."

Watkins said the city can't drop its current business "at this late date" to start a study.

"Anyway, it is a decision that the council will have to make. Even a ballot poll doesn't give you a 100 per cent opinion of all the citizens," he said. "The council was elected to make policy decisions and it has the prerogative to decide whether the city can afford to spend the needed money for such a program."

"We will request the city officials to change their ordinance to permit commercial firms to pickup wastepaper for recycling," Mrs. Hancock said.

According to Mrs. Hancock, the students have collected 200 signatures of city residents on a petition pledging support to the proposed program.

"One local store disposes of 30 tons of waste paper each week," she said. "If the city would give the stores a minimum break and allow commercial recycling firms to come into the city to pickup this material it would certainly help the ecology."

Councilman Ed von Nordeck said today he was "very thankful a group such as this is interested in ecology."

"My second reaction to Mrs. Hancock's suggestion a referendum be considered to test the voter's opinion is she may be jumping the gun," he said.

"We have to look at the cost factor to the city in anything we do. We are in the position, with the limited tax the legislature has imposed, when we cannot afford to take a $50,000 or $60,000 loss."

Watkins told the council Tuesday night the city would lose revenue in its sanitation department if occupational licenses were issued to outside firms for the collection of trash. "They would be in direct competition to the city," he said.

The council directed Watkins to study the possibility of having the city enter the recycling business and to have a report by the next scheduled meeting.

Councilman Robert McKemy said he thinks Mrs. Hancock has a "fabulous idea."

"I would certainly have no objections to having it placed on the ballot as a referendum item," he said. "If all the teachers and students in our city would get behind the program it would certainly pass in November."

McKemy said he understood the county commission is considering a recycling program. "Maybe we could work in cooperation with the county and even if it cost a lot, I believe people would be interested and cooperative."

Councilman Bill D. Clark said today he thinks the city cannot afford to become involved in a wastepaper recycling program, because within a short period of time the city will probably be involved in the county's solid waste disposal program.

"I understand the county's program will include extracting wastepaper, bottles and aluminum cans for recycling, and it is going to take care of the entire problem in Brevard."

TEACHER COMMENT NO. 10

Antipollution Resolutions Highlight Melbourne City Council Meet Tonight

Antipollution petitions and another resolution concerning the four laning of U.S. 192 highlight a long agenda for Melbourne City Council tonight.

Joyce R. Hancock, a teacher at Central Junior High, and her students are involved in doing something about pollution.

TONIGHT THEY will present petitions asking the city of Melbourne to consider proposals for recycling wastes from supermarkets and industrial firms.

Melbourne City Manager Earl Watkins has been conducting an investigation into the feasibility of getting into the recycling business, and said he should have his report ready for council tonight.

Watkins indicated he will not recommend the city get involved in recycling paper or other reusable resources, but added the final decision is up to the council.

IN RECENT weeks councilmen have indicated they are for recycling and other pollution control measures as long as they don't cost anything.

Council quickly declined any action on a request from the Republican executive committee that the city pick up old newspapers once a week if residents would bundle them and leave them at the curb.

The department of transportation asked the city to pass a resolution approving a "corridor location of four lanes of U.S. 192 from U.S. 1 east across the Indian River to the existing four lane section."

"THIS DOESN'T tell us whether it will be a high rise bridge," Watkins said, "but we're all for the four laning so I guess we'll pass it."

Council is also scheduled to hear a report from John Downs, general manager of Computer Services Division of Symetrics on the advantages of using local data processing service bureau.

A report from Chamber of Commerce president Maurice Rouede concerning an advertising and sales promotion program for Melbourne is on the agenda.

TEACHER COMMENT NO. 11

Melbourne Keeps Plan On Trash

By AL MARSH
South Assistant Metro Editor

Melbourne city officials clung firmly to the city's trash Tuesday night in the face of a petition containing the names of 1,000 persons who asked that it be recycled.

"Our children are looking to you as leaders to do something before they are buried in garbage. They would rather you start now on the solution," said Mrs. Joyce R. Hancock, a Central Junior High School ecology teacher.

But assistants to City Manager Earl Watkins said the city would lose $8,000 annually if it allowed the trash to be recycled.

Mrs. Hancock's students were petitioning against a Melbourne City law which prohibits outside trucking firms from entering the city to pick up trash, which is then carried to a Rockledge firm which ships it to paper mills.

The law is designed to protect the city's $52,000 annual revenues from trash collection.

Melbourne Councilman Ed Von Nordeck suggested the answer might be to invite East Coast Paper Stock, Inc., of Rockledge to locate in Melbourne.

Mayor Milton McGrath thanked Mrs. Hancock for the petition and said, "We'll take it from here."

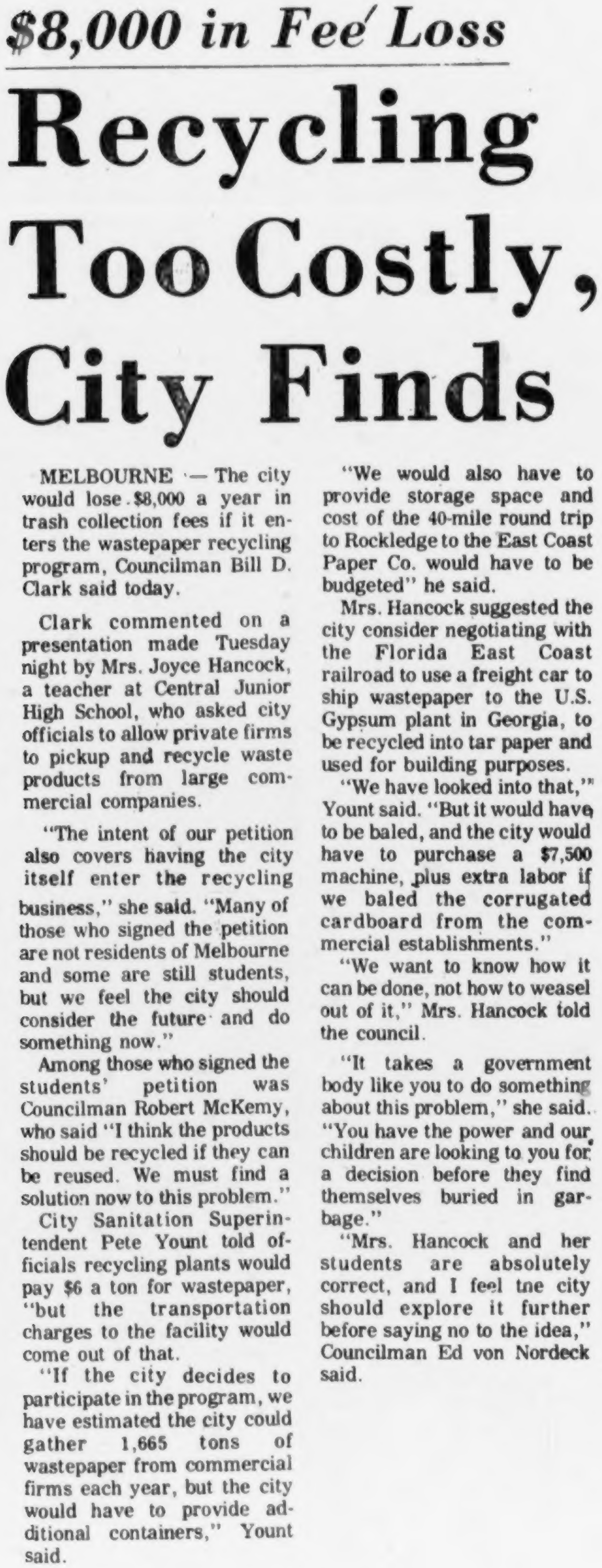
"The question is, how can you do it? — not how can you weasel out of it?" Mrs. Hancock concluded.

In other action, Councilman Bob McKemy challenged an award of bid on police cars.

He said 10 late model, high-mileage cars were being traded in for $900 each when their actual trade-in value would be more than $2,000.

But the council approved the bid by Riverside Dodge of Melbourne.

TEACHER COMMENT NO. 12



$8,000 in Fee Loss

Recycling Too Costly, City Finds

MELBOURNE — The city would lose $8,000 a year in trash collection fees if it enters the wastepaper recycling program, Councilman Bill D. Clark said today.

Clark commented on a presentation made Tuesday night by Mrs. Joyce Hancock, a teacher at Central Junior High School, who asked city officials to allow private firms to pickup and recycle waste products from large commercial companies.

"The intent of our petition also covers having the city itself enter the recycling business," she said. "Many of those who signed the petition are not residents of Melbourne and some are still students, but we feel the city should consider the future and do something now."

Among those who signed the students' petition was Councilman Robert McKemy, who said "I think the products should be recycled if they can be reused. We must find a solution now to this problem."

City Sanitation Superintendent Pete Yount told officials recycling plants would pay $6 a ton for wastepaper, "but the transportation charges to the facility would come out of that.

"If the city decides to participate in the program, we have estimated the city could gather 1,665 tons of wastepaper from commercial firms each year, but the city would have to provide additional containers," Yount said.

"We would also have to provide storage space and cost of the 40-mile round trip to Rockledge to the East Coast Paper Co. would have to be budgeted" he said.

Mrs. Hancock suggested the city consider negotiating with the Florida East Coast railroad to use a freight car to ship wastepaper to the U.S. Gypsum plant in Georgia, to be recycled into tar paper and used for building purposes.

"We have looked into that," Yount said. "But it would have to be baled, and the city would have to purchase a $7,500 machine, plus extra labor if we baled the corrugated cardboard from the commercial establishments."

"We want to know how it can be done, not how to weasel out of it," Mrs. Hancock told the council.

"It takes a government body like you to do something about this problem," she said. "You have the power and our children are looking to you for a decision before they find themselves buried in garbage."

"Mrs. Hancock and her students are absolutely correct, and I feel tne city should explore it further before saying no to the idea," Councilman Ed von Nordeck said.

TEACHER COMMENT NO. 13 : Evaluation Form For Oral Report
(To be filled in by students and/or teacher)

Subject of Report____________________ Student reporting____________________________

I. Knowledge of subject matter and/or what way questions were answered.

_____a. Excellent (5 points) _____b. Good (4 points) _____c. Fair (3 points)
_____d. Poor (1 point)
Points Earned_______________

II. Presentation of material by using audio/visual aids. Evaluate each aid used from 0--5 points.

_____a. Charts _____b. Maps _____c. Graphs
_____d. Guest Speaker _____e. Slides _____f. Films
_____g. Filmstrips _____h. Table Display _____i. Study Guides
_____j. Puzzles/Games _____k. Skits _____l. Other
Points Earned_______________

III. Equipment used in presentation. Evaluate each aid used from 0--5 points.

_____a. Opaque Projector _____b. Filmstrip Projector _____c. Overhead Projector
_____d. Film Projector _____e. Globe _____f. Chalkboard
Points Earned_______________

IV. Speaker's attitude towards listeners, tone, and quality of voice should be considered. Evaluate as #1.

_____a. Excellent _____b. Good _____c. Fair
_____d. Poor
Points Earned_______________

V. Evaluation of the participation of the members of the groups. (Use where applicable)

_____a. Excellent _____b. Good _____c. Fair
_____d. Poor
Points Earned_______________
Total Points_______________

TEACHER COMMENT NO. 14 : Small Group • Self-Evaluation

Instructions: Students are to list members of their group (with the exception of themselves) in the order of how valuable each was in accomplishing the group's goals. The ranking of members is collected and each group member's total score is determined by adding up the number he was ranked by each of his fellow group members. Each student's group rank is determined by listing them from the lowest total score to the highest total score. The member with the lowest total score is considered to be the most valuable.

Sample Form for Students

SMALL GROUP SELF-EVALUATION

Instructions: List group members in the order of how valuable each was in accomplishing the group's goals. Do not list your own name. For example if your group has six members, list five names in the order of their importance to your group's success. By each name indicate the grade you think each member deserves and make any comments about their work that you wish. This individual evaluation will remain confidential.

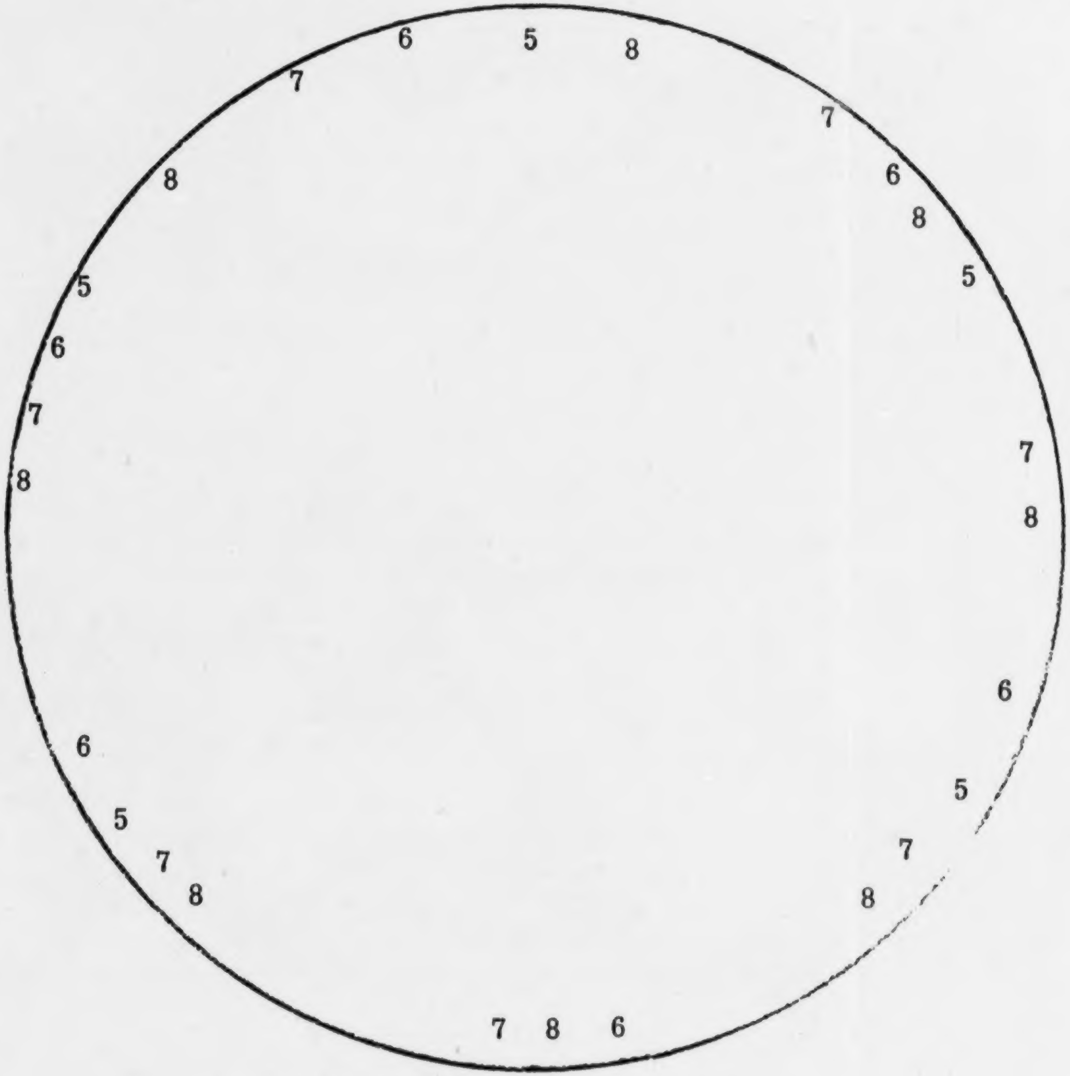
Rank Order of Members of the Group. (Names)	Letter Grade They Deserve	Comments
1.		
2.		
3.		
4.		
5.		

TEACHER COMMENT NO. 15 : Small Group • Flow of Contributions

Date____________________

Time_________to_________

Problem____________________



Instructions:

Circle each number that corresponds to the number of participants in the group and write the name of each member on one of the numbers. Draw a straight line from the first person who makes a contribution to each succeeding contributor as long as the discussion proceeds.

Evaluator____________________

TEACHER COMMENT NO. 16 : Small Group • Pattern of Contributions

Date____________________

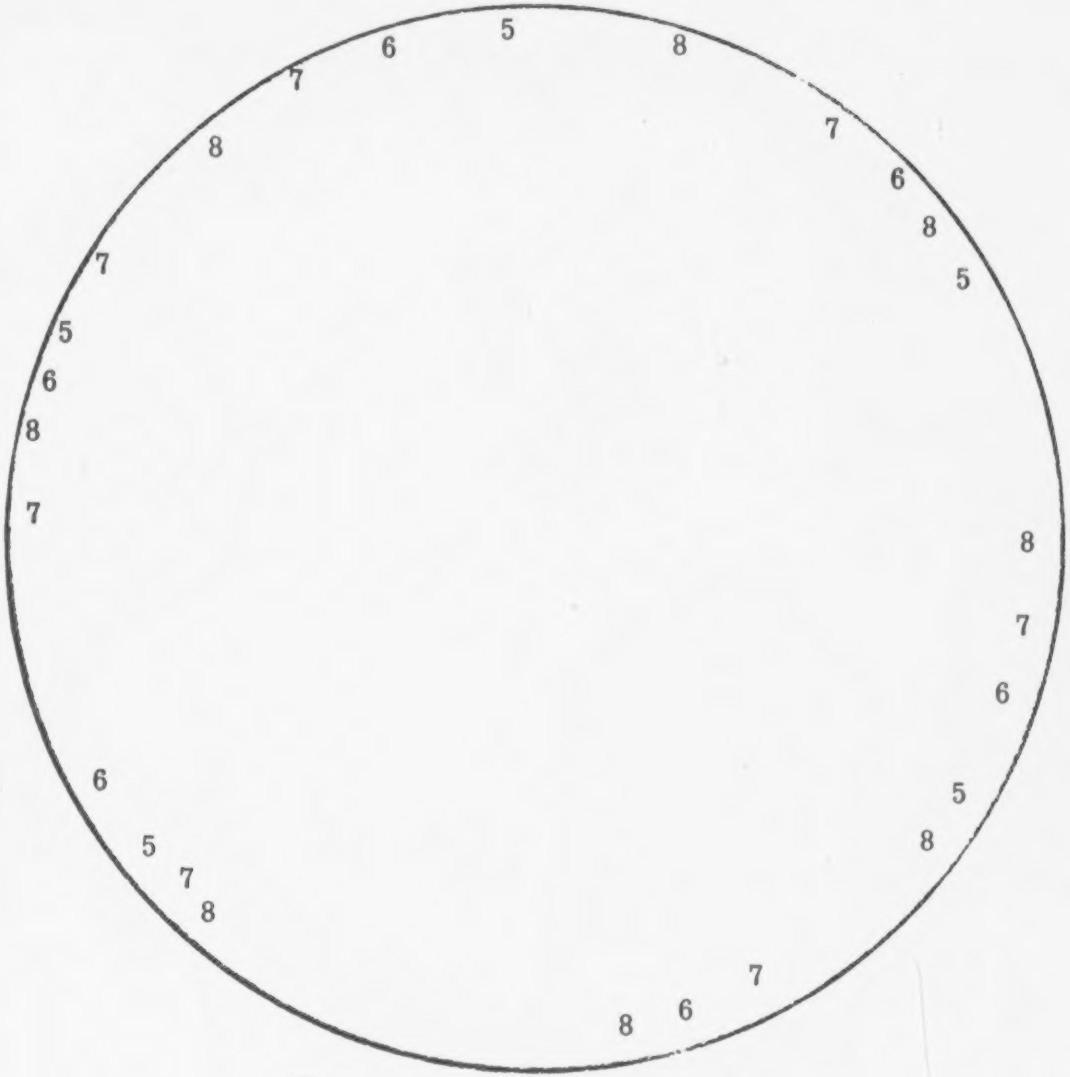
Time________to__________

Problem________________

Instructions:

Circle each number that corresponds to the number of participants in the group and write the name of each member on one of the numbers. Draw an arrow (length of arrow in proportion to length of contribution) from the contributor toward the person to whom the contribution is directed. If the contribution is directed toward the entire group, direct the arrow toward the center of the circle.

Evaluator________________



TEACHER COMMENT NO. 17 : Small Group • Individual Evaluation

Date__________ Time_______ to_______ Problem__________ Participation__________

Excellent Poor		Item
1 2 3 4 5	1.	Was well prepared for discussion
1 2 3 4 5	2.	Used prepared outline properly
1 2 3 4 5	3.	Kept running outline of discussion
1 2 3 4 5	4.	Contributed readily at every opportunity
1 2 3 4 5	5.	Contributions were presented at the proper time
1 2 3 4 5	6.	Contributions were brief
1 2 3 4 5	7.	Contributions were clearly stated
1 2 3 4 5	8.	Showed evidence of a firm grasp of discussion theory
1 2 3 4 5	9.	Used constructive reasoning rather than intentional reasoning
1 2 3 4 5	10.	Demonstrated objectivity
1 2 3 4 5	11.	Reasoned critically
1 2 3 4 5	12.	Showed open-mindedness
1 2 3 4 5	13.	Provided sources of facts and other bases for opinion readily
1 2 3 4 5	14.	Answered questions asked of him readily
1 2 3 4 5	15.	Listened well to contributions of others
1 2 3 4 5	16.	Demonstrated an attitude of cooperation rather than competition
1 2 3 4 5	17.	Talked clearly, distinctly and audibly
1 2 3 4 5	18.	Courteous and respectful of others (didn't interrupt, etc.)
1 2 3 4 5	19.	Encouraged others to contribute to the discussion
1 2 3 4 5	20.	Assisted in providing leadership services
		Total Evaluation
1 2 3 4 5		Rating of total performance in relation to other members of the group
		Group Evaluation
1 2 3 4 5		Rating of the whole group in relation to other group discussions witnessed.

Instructions: Circle the number for each item that tends to represent your opinion about the quality of participation demonstrated.

Evaluator________________

TEACHER COMMENT NO. 18 : Goals for Brevard County

Air, water, and land pollution is not a major problem in Brevard County. Unlike the national environmental crisis presently drawing the attention of politicians, scientists, and citizens, Brevard's natural environment is an asset rather than a liability.

Our air is not polluted with industrial waste since most industry is electronic or space oriented.

The county's 179,000 acres of surface water is in most cases clean. There is some organic pollution caused by hyacinths and other decaying aquatic weeds and a danger exists in some areas from the dependence on septic tanks for sanitary sewage; but the Banana, Indian and St. Johns Rivers are not now receptables for heavy industrial or chemical wastes.

Over 500,000 acres of land remain in their natural state, not scarred by the wounds of thoughtless sprawling development. Massive areas of wet marsh land provide the necessary ecological balance for our abundant wildlife and natural drainage network. However, growing numbers of discarded junk cars and the continued use of land fills for the disposal of solid waste threaten some land areas.

Brevard's problem in conservation is not one of combating pollution or eradicating it; but rather, it is one of preserving the favorable environment that it has.

OBJECTIVES:

- Replace landfills with a county-wide solid waste disposal system.
- Act to eliminate junk cars.
- Enact policies to manage water resources including water supply, drainage, and sewerage disposal.
- Eliminate fraudulent land sale practices.
- Enact and enforce pollution policies.

- Preserve the natural habitats of Brevard County's abundant wildlife
- Cooperate with the state to control hyacinths and other aquatic weeds
- Encourage the preservation of agricultural lands
- Avoid unnecessary bulk-heading
- Stop beach erosion
- Enact legislation to demolish abandoned, dilapidated houses.

Board of County Commissioners, May, 1970.

TEACHER COMMENT NO. 19 :1970 Annual Report Of Brevard County Health Department

Excerpts from this agency's annual report can clearly demonstrate its activities in the environmental sphere. Note how this report illustrates in part the ideas stated in the first two sections of this Unit's outline.

AIR POLLUTION

...agencies.. interact?

The results from the second year of operation of five air pollution effects stations were tabulated and forwarded to the U.S. Public Health Service for their review, information and comments. The results from these five air effects stations will indicate trends and effects of air quality over the years. These static type stations provide air quality parameter data on corrosion, sulfation, dustfall, wind-blown particulates, rubber cracking and nylon deterioration. The results from the third year operation of these stations are now being summarized and tabulated.

The annual average results from completion of two years' operation of hi-vol air sampler for collection of suspended particulates for the Florida Air Monitoring Network indicate that airborne particulates in this area are among the lowest in Florida.

...agencies.. enforce.. laws?

An improvement in air quality in the areas of the south landfill and Merritt Island trash dump was experienced when the County assumed the responsibility for operation or maintenance of the facilities. No intentional burning of trash or garbage takes place any longer at these disposal sites. The County will assume operation of the north and central disposal sites early in 1971 and no burning will be allowed. Burning dump problems in the County will be alleviated.

...agencies.. interact?

The majority of air pollution complaints continues to arise from poor operation of supermarket incinerators. A few of these supermarket incinerators have been replaced by trash compactors and/or bailers during the year. Plans have been made to replace more of these incinerators in the future by installation to compactor-bailer type facilities.

...agencies.. interact?

In the fall of the year, a consultation to designate an intrastate air quality control region for the Central Florida area of which Brevard is a part was conducted by the National Air Pollution Control Administration of the U.S. Public Health Service. This consultation was requested by the Florida Department of Air and Water Pollution Control under the U.S. Clean Air Act. This first step to become part of a six-county air quality control region was supported by this department. The next step is formal designation of the proposed region, then issuance of air quality criteria to control concentrations of air pollutants harmful to health and damaging to property. The formal designation and standards for air pollutant emissions will hopefully be established in early 1971.

SEWERAGE AND INDUSTRIAL WASTE FACILITIES

...agencies.. interact?

...The Brevard County Health Department, in cooperation with the Division of Health and Region Three, Florida Water and Pollution Control Operators Association, sponsored the Fifth Annual Short School, September 9 through 16, in the Health Department auditorium in Rockledge...The school's objective is to improve the quality of management, operation, and maintenance of all public and privately owned water and waste-water treatment facilities.

...agencies.. enforce...

The lift station survey and inspection for all sewerage systems were continued during 1970 with an additional thirteen (13) systems inspected. Deficiencies discovered during these inspections are brought to the owner's attention for correction; the result has been a decline

laws? in the number of lift station failures and subsequent sewer system overflows in the County.
During 1970, this department, in cooperation with and based upon recommendations from
...agencies.. the Division of Health and the Department of Air and Water Pollution Control, initiated a
enforce... program to phase out the use of chromium compounds in cooling towers in the County.
laws? Elimination of chromium compounds and use of less objectionable compounds is possible.
...agencies.. Surveillance was continued to insure that chromium compounds were not being used at
interact? facilities previously requested by this department to discontinue their use.

SHELLFISH

The "conditionally approved" shellfish harvesting area located in the south end of the County
...agencies.. was closed once during the year in September, due to excessive rainfall; the area was
enforce... closed from September 30 to October 24, a time of little or no commercial harvesting of
laws? oysters. With this exception, both shellfish harvesting areas remained open throughout
the year with continued monthly sampling to insure that water quality complies with the set
...agencies.. standards. An updated shoreline sanitary survey of both the north and south shellfish
interact? harvesting areas was completed as required by the Florida Division of Health and the U.S.
Public Health Service. This shoreline survey, along with the continuous monthly water
sampling program, enables both areas to remain open and approved for the harvesting and
direct marketing of shellfish.

During 1970, in cooperation with the U.S. Department of Interior, Dauphin Island, Alabama,
...agencies.. laboratories and the Florida Division of Health, special water and shellfish meat samples
interact? were collected from within and near shellfish harvesting areas for analysis of pesticides
and heavy metals. Analysis of the waters from the Indian River showed no pesticide
residual from the ten most commonly used chlorinated hydrocarbons. The analysis of the

water and meat tissues indicated no mercury was present, and levels of other common heavy metals measured were within recommended limits.

SOLID WASTE DISPOSAL

...agencies.. ...enforce.. laws?

...An ordinance requiring mandatory garbage and rubbish collection in the unincorporated areas of the County was adopted by the Board of County Commissioners and will go into effect in 1971. This ordinance should greatly reduce the dumping of garbage and rubbish along the roadsides, ditches and waterways of the County on both public and private property. The many problems created and clean-up expenses incurred by unauthorized dumps and dumping of garbage over the countryside can possibly be almost eliminated by this ordinance. Many problems in enforcement of this ordinance are expected to arise and must be overcome if the desired effect of a cleaner community is to be obtained.

WATER POLLUTION CONTROL

...agencies.. interact?

The monthly water sampling program for basic data on the St. Johns River was continued at selected stations during the year, in cooperation with the Orange County Pollution Control Department. A summary of water quality findings from this cooperative sampling program was presented in a joint effort report to the Florida Department of Air and Water Pollution Control at a St. Johns River public hearing held in Palatka.

...agencies.. interact?

The U. S. Geological Survey team under contract with the Central and Southern Florida Flood Control District completed studies of the physical, chemical, and biological conditions of the major tributary systems to the upper St. Johns River. This department provided assistance in portions of the biological studies on this survey. A report on their findings is under preparation and will be published soon.

The water quality monitoring and surveillance program on the Indian and Banana Rivers

...agencies..
enforce..
laws?

continued with special attention to the shellfish harvesting areas. A program for establishing qualitative and quantitative preliminary production levels of plankton and brackish water marine plants from twenty-six (26) representative sampling stations in the Indian and Banana Rivers was established. This biological growth date study will compliment the survey of bottom living organisms and when correlated with chemical and physical water quality parameters will provide a new additional insight toward the measurement and control of water pollution. The bacteriological results of the department's sampling program...indicated excellent bacteriological water quality for recreation uses throughout the County.

...agencies..
enforce..
laws?
...agencies..
interact?

During 1970, construction of the Pineda Causeway project under the Department of Transportation was commenced. During the dredging phases of this project, as a result of water quality monitoring for turbidity by this department at several locations in the immediately affected area, the dredging was halted upon request for turbidity and siltation and control on two occasions.

...impetus..
to current..
laws?
...agencies..
interact?

A public hearing by the Florida Department of Air and Water Pollution Control for establishing stream classifications for the St. Johns River was held in the fall of the year. This department with support of the City of Melbourne and Board of County Commissioners requested that the St. Johns River from the Lake Washington Dam south to State Road 60 in Indian River County be classified as Class I - Public Water Supply, the present use. The St. Johns River north of Lake Washington in Brevard County is classified as Class III -Recreation, Fish and Wildlife Propagation. The Class I- Water Supply request was granted at a later date.

...impetus..

A public hearing by the U.S. Corps of Engineers on the proposed Sanford-St. Johns-Indian River Canal was held in the fall of the year. This department, from previous stream

to current... laws?	studies and water quality data obtained from the area to be affected, recommended that the Board of County Commissioners oppose construction of the project at this time. The department also entered written opposition to the project. Final determination on the project by the Corps of Engineers has not been made.
...agencies.. interact?	

Unsung Public Servants

It was about 1969 before the United States got caught up in the "ecology" movement. Sure, we have had people who used to be called "conservationists" for many years, but they were generally considered far-out types who frequently tried to block "progress."

Now that mankind throughout the world has come to realize that the earth is merely a "space ship" with a fragile balance of expendible resources, the "environmentalists" have gained complete respectability.

We in Brevard can take some pride in the fact that our governmental officials were several years ahead of the mass awakening to the need for environmental safeguards.

It was in 1965, after a health survey made them aware of the potential problems of pollution, that the county commission (Lee Wenner, Richard Muldrew, Guy Brewster, Ed Kittles and George King Jr.) took the first steps toward environmental protection.

One of the recommendations of the health survey was that a committee be appointed to do the technical investigations into pollution problems which the county commission did not have the time or expertise to do. About this same time, the shellfish industry in Brevard began to experience a decline which those who were involved attributed to an increase in pollution in the Indian River. In an effort to determine what the county could do to assist in eliminating the shellfish problem, the commissioners appointed a committee of interested individuals to work with the Environmental Health Division of the County Health Department, in evaluating the problem and offering suggestions for action.

As a result of the committee's activities, the county established a monitoring system for the river which allows the health department to keep the river open for shellfishing as much as possible; and closing it only during rainfall of one inch or more which creates a heavy run-off and an increase in the pollutents in the river.

The commissioners felt that this problem had been handled in such a manner as to allow maximum use of our shellfishing waters, and at the same time allow the health department to make an evaluation as to the contributors to the pollution in the river. It was felt that the activities of this group should be expanded to include all aspects of our environment.

Therefore, in 1966, the county commission created the Brevard County Environmental Control Committee and charged it with the responsibility of investigating all potential pollution sources; and requesting that once its investigations were completed that recommendations for solutions be presented to the commission for action.

This commission, though little-known, has worked dilligently and with dedication to its assigned task. The committee consists of 10 members, two are appointed by each county commissioner from his district. They receive no pay for their work. They meet on the last Monday night of each month.

The current members are: District 1, Thomas Lookabaugh and Don Prather; District 2, Malcolm McLouth and Karl Eichorn; District 3, Dr. David Woodbridge and Dr. Alan C. Havier; District 4, James Oxford and Raymond Bolton; District 5, Arthur Beach and Dr. Jack Bechtel.

The list of significant projects this group has worked on is too long for this space. All Brevardians — even the land deevlopers — should be thankful for the efforts of this group. In the final analysis, it could well be this committee's recommendations that determine what the quality of life will be like around these parts in a decade or so.

TEACHER COMMENT NO. 21 : Government Interaction To Control Air Pollution

Federal involvement in air pollution control has increased gradually over the past 17 years from what was at first largely an advisory and supportive position to an increasingly active role in the establishment and enforcement of air quality standards.

The first federal air pollution legislation was a 1955 law entitled "Air Pollution Control -- Research and Technical Assistance." The role of the federal government was limited therein to extending grants-in-aid to state and local air pollution control agencies for research, training and demonstration projects; furnishing technical advice and assistance, and disseminating information concerning air pollution. In deference to the concept of federalism, no police power was vested in the federal government, nor were any federally-imposed standards incorporated. State sovereignty was maintained.

The Clean Air Act of 1963, however, expanded considerably the active involvement of the federal government in the control of air pollution. The act specified that federal aid be directed primarily to states rather municipalities, in order to encourage the rapid development of state-level air pollution control legislation. The Secretary of the Department of Health, Education and Welfare was authorized (though not directed) to issue non-mandatory air quality standards and to report on attempts to control pollution from automobile exhaust emission. Significantly, he was empowered to intervene directly when "health and welfare" were threatened if a state proved unable to handle the situation. Finally, recognizing the need for regional cooperation, the 1963 act provided financial incentives for the development of intermunicipal and interstate agencies for the control of air pollution.

Direct federal involvement in air pollution was further increased with the passage in 1965 of amendments to the Clean Air Act. The Secretary of the HEW was authorized, under the commerce clause, to supersede state and local agencies in the promulgation and enforcement of auto emission standards. Furthermore, he was authorized to take action on pollution complaints filed by international agencies or by the Secretary of State. This included the ultimate right to bring suit against the polluter.

The gradually expanding role of the federal government culminated with the Air Quality Act of 1967. The Secretary of the HEW was charged with the responsibility of issuing air quality criteria, distributing such criteria and information concerning control techniques, and establishing air quality control regions. States were then responsible for the implementation of standards which enabled them to conform to regional air quality requirements. The federal government was empowered to intervene if any state failed to comply with such specifications, and, if necessary, to sue states in order to correct instances of interstate air pollution. Furthermore, the Secretary was authorized to request the Attorney General to initiate an immediate federal abatement action in any air pollution situation which he considered to present an immediate health hazard, bypassing all other channels. He was also given exclusive jurisdiction over the establishment of improved emission standards for new motor vehicles, superseding all state standards except those previously enacted in California, which were more stringent. He was empowered to require the registration of all fuel additives, and authorized to research the feasibility of formulating national emission standards. In 1970 this function of the HEW Secretary was transferred to the Administrator of the newly-formed Environmental Protection Agency. Legislation authorizing national emission standards was at that time pending in Congress.

In addition to increasing the degree of federal regulation, the 1967 Air Quality Standards Act de-emphasized local controls and encouraged regional cooperation by means of substantial economic incentives. However, such regional groups were compelled to conform to federally determined air quality regions, a provision which disbanded three regular compacts at the threshold of implementation. At present, the control of auto emissions is the only instance of direct federal involvement in the determination and enforcement of specific pollution control laws. In general, the federal government has limited its involvement to establishing regional performance standards, leaving to the states the development and enforcement of emission standards needed to adhere to regional requirements.

The inter-relationship of state and local governments in the matter of air pollution control is analogous to the inter-relationship of federal and state governments. Federal grant-in-aid funds provided the impetus for the development of state and local codes governing air quality. Most states have enacted air pollution control legislation and designated a state agency -- usually the health department -- or established a separate commission to promulgate standards and codes. Local governments are generally allowed, though not compelled, to enact separate legislation, as long as their standards satisfy or surpass state specifications. In Florida, the state agency reviews all local regulations before they become effective. State governments extend technical advice and assistance to localities, much as the federal government extends such aid to the states. A few states require municipalities and other local governments to participate in area-wide regulation or else be subject to direct state regulation. Many state laws authorize regional cooperation, but none render it compulsory.

The Council of State Governments recently proposed a model state air pollution act designed to streamline the administration of controls at different governmental levels. It runs parallel to the federal-state set-up. According to this plan, the state is to compel municipalities to institute and administer air pollution control programs providing standards equal to or stricter than state requirements, to approve all local programs, and to intervene where local governments fail to fulfill responsibilities. In addition, state agencies may require area-wide control programs where necessary and intervene to administer them if local governments fail to do so effectively. Finally, the state may assume exclusive jurisdiction over certain air pollutants if essential to effective control.

The model state air pollution control act is particularly important in light of the conflicts sometimes brought about by the structural independence of many state and local control programs presently underway. Although the state theoretically supervises all local programs, a good deal of inconsistency and disjunctiveness often exists. Two specific problems contribute to the difficulties of administering state and local air pollution control agencies. The first is the traditional domination of such regulatory agencies by representatives of the industries which pollute, causing the adoption of standards which weigh economic factors more heavily than claims of public health. Secondly, there are wide differences between state and local codes concerning the extent of coverage and the degree of technical sophistication. The more sophisticated the code, the more complex the monitoring system and the more highly trained the personnel required to enforce it. A highly technical state code would probably exceed the enforcement capacities of many localities, necessitating state assistance of intervention to assure the effective administration of the measures.

TEACHER COMMENT NO. 22: Government Cooperation?

Both to the north and the south of the City of Cocoa Beach is unincorporated county areas where septic tanks have been allowed in the past. The increasing populations in the areas combined with high water tables have made septic tanks a health hazard. The county is responsible for these areas but have no sewer treatment systems located conveniently. The City of Cocoa Beach is located adjacent to these areas and has a very modern sewer system. The City of Cocoa Beach and Brevard County are presently negotiating a cooperative deal; Brevard County will install the sewer pipes and pumping stations, then pay the City of Cocoa Beach to maintain them; the City of Cocoa Beach will treat the sewage in their treatment plant; Brevard County will collect the special assessment revenues to pay for installing the system; City of Cocoa Beach will collect the monthly sewer service charges for operation expenses.

TEACHER COMMENT NO. 23 : Evaluation Form for Visuals

There are four major areas of importance indicated on this form. Teachers who grade on a percentage basis should insert a value in each blank to determine the weight of each area in relation to the others, making the sum of all blanks on a perfect item total 100. Teachers using other systems (such as variable points) should determine the proper value of each area. Note: part 4 clarity, has four sub-areas which combine to make the total value for part 4. This form is intended as a suggested guide for teachers and/or students to evaluate visual presentations produced by students.

Student's Name_______________ Title or Topic_______________

VALUE AREA OF EVALUATION

1. APPROPRIATENESS
_______ If the student has had an opportunity to select either the topic or method of his presentation, is the choice of either or both appropriate to the assignment?

2. ACCURACY
_______ Are the facts used in the presentation accurate? If not, where is the inaccuracy?

3. COMPLETENESS
_______ Does the presentation represent a complete statement or coverage of the subject (Is there material or facts omitted which makes the presentation misleading) ? If not, where is the presentation lacking?

4. CLARITY
Is the presentation clear to the viewer?
_______a. Is the viewer readily able to determine the point or message contained in the presentation?
_______b. Is the presentation free from unnecessary distractions? (pictures, drawings, etc. which do not contribute to the purpose?
_______c. Are the colors and sizes of lines, bars, and/or pictures suitable?
_______ _______d. In the case of a collage or drawing, is the focal point clearly determined?

_______ COMMENTS:_______________
(Total Score)

TEACHER COMMENT NO. 24 :Ecology Court

A small green ecology flag flutters right beside the United States flag on the bench of Judge William H. Walden in Louisville, Kentucky. Judge Walden presides over what is believed to be the only special Ecology Court in the nation. Operated by Jefferson County, it handles only cases involving despoilage of the environment in the Louisville area, ranging from large factories to neighborhood leaf-burners. Of the first 497 cases brought before the court, only two defendants have been acquitted. The others either were convicted, pleaded guilty, or saw charges against them recorded in an indefinitely pending file.

Although he is empowered to levy fines ranging from $25 to $500 for a single pollution conviction, Judge Walden prefers to use the court as a deterrent and an instrument of education. He seldom assesses fines for first offense or in cases where the defendant has demonstrated effort to correct the problem. Many such offenses are placed in the pending file. Fines for second offenses are much steeper.

The most controversial aspect of the Ecology Court was a plea contained in a widely-distributed county brochure calling for citizens to report any and all air pollution violations--whether factory fumes or wisps of smoke from leaf-burners down the street. A cash reward of up to $25 was offered for such information. Many feared that a rash of "bounty-hunting" would ensue. Judge Walden envisioned a situation where two neighbors would file counter-charges, with a cash reward hanging in the balance. Actually, very few citizen arrests occurred--about 10 of the 497, the judge estimated. And even in those cases the cash reward did not appear to be the incentive. Nearly all charges were filed by city-county inspectors.

Although most of its cases involve undeniable guilt, Ecology Court is not a partisan agency crusading for the environment; it requires concrete evidence. This was apparent in one instance where Judge Walden refused to be swayed by a professional biologist who made his living by what he himself termed "hounding pollution offenders." Attacking a Louisville meat-packing plant for allegedly discharging unhealthful materials into Beargrass Creek, the biologist used phrases such as "polytrophic actrobacter" and "diatoms and other microalgae." When the court requested the terms be translated into legal perspective the biologist demurred, claiming the information could not be analyzed in legal terms. The judge promptly dismissed the case.

Conceived by Jefferson County's chief administrative officer Todd Hollenback, Ecology Court has heard up to 66 cases on a Friday afternoon. Typical cases were:

1. An ederly lady, charged with open burning of leaves, claims the pile of leaves was inadvertently ignited by a spark from her cigarette. Unconvinced, Judge Walden places the charge in the pending file, warning the lady either to improve her story or come prepared to pay the next time.

2. A construction firm admits to burning trash wood in the open. It is not the first offense. "You'll soon be supporting the county," predicts the judge, issuing a fine of $50.

3. Two hog feeders (brothers) who had already been fined $700 for creating a health hazard at their feed lot, are brought up on charges of open burning. They maintain the fire in question was lighted by some kids. Saying, in effect, that he had heard that story before, Judge Walden fined the pair $100 plus costs, and warned that the maximum $500 penalty would be imposed for any subsequent violation.

4. Another construction firm is accused of open burning. The prosecution enters a statement from the man tending the fire: "It was only a matter of time before we'd be caught." In angry interposition, the defense attorney disclaims the employee's statement. The case is continued.

Preventive measures are preferable to punitive measures, Judge Walden believes. He frequently gives lenient dispositions to first offenders along with a stern lecture warning against a repetition of the violation. The judge also makes several ecology speeches each week. In the interest of generating publicity favorable to ecology, he has suggested bestowing a facetious "award" to the county's worst polluter at periodic intervals.

What has the Ecology Court accomplished? The chief of staff of the city-county air pollution board, Robert T. Offutt, said that tests revealed cleaner air since the court's inception. In addition, field inspectors reported increasing public awareness of ecology laws and far fewer instances of violators pleading ignorance of the laws.

How broad is the jurisdiction of the court? Judge Walden relates a story of a quasi-ecological case with an interesting twist. A Jefferson County resident with an expensive foreign sports car filed charges against the owner of a cat (Willard by name) which had allegedly slept on top of his car and damaged the convertible top with his sharp claws and muddy paws. Judge Walden, weighing the arguments of "prominent County residents," found for the defense, exonerating Willard because there was no proof that the footprints were his.

TEACHER COMMENT NO. 25 :The Constitutional Right To Clean Air And Water: The Trust Theory

The ultimate authority for interpretation of legal actions relating to the environment is, of course, the United States Constitution. Interpreted by the United States Supreme Court, the Constitution is supreme over the statutes and the decisions of lower courts. At the state level, similar authority is vested in state constitutions.

If the United States Constitution or Bill of Rights referred specifically to citizens' right to a clean environment, it would be a simple matter to bring suit against anyone who threatened to deprive a citizen of any aspect of that right. However, no such guarantee is expressedly stated. Nevertheless, some lawyers believe that a court can "find" a guarantee to a clean environment by an elastic interpretation of the Bill of Rights, in a way similar to a 1965 Supreme Court "discovery"of a right to privacy, which is not explicit in the Bill of Rights. * These lawyers draw upon four constitutional amendments for their interpretation:

First: Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; of the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

Fifth: No person shall be - deprived of life, liberty or property, without due process of law; nor shall private property be taken for public use without just compensation.

Ninth: The enumeration in the Constitution, of certain rights, shall no be construed to deny or disparage others retained by the people.

14th: No state shall make or enforce any law which shall abridge the privileges or immunities

> of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

The Ninth Amendment provides a particularly strong support for the environmentalist interpretation because it specified that the rights of the people are not limited to those expressedly stated in the Bill of Rights. It has also been argued that the First Amendment, and the Bill of Rights in general, can be construed to assure citizens' right to an unspoiled environment by considering this a basic inalienable right. The 14th Amendment forbids a state from depriving a person of life, liberty or property without due process of law. The Fifth Amendment applies the same restraint to the federal government. Although these limitations apply to governments, they may also be applied to individuals where "state action" is involved. "State action," involving widespread public interest, was claimed in a recent court action against DDT manufacturers in New York.

A comprehensive analysis of the role of the Bill of Rights in environmental protection by lawyer Dave Sive appeared in the April, 1970 issue of Civil Liberties (published by the American Civil Liberties Union). Sive emphasizes the Fifth and 14th Amendments, explaining how the Fifth Amendment was pleaded in the Santa Barbara oil spill. The pleading referred to "the right to live in, and enjoy, an environment free from improvident destruction or pollution," and "the right to ownership, use and enjoyment of property, free from improvident invasion or impairment." ** Sive also discusses the application of the Ninth Amendment in the Cross Florida Barge Canal case.

Instead of attempting to apply the present Constitution to environmental protection, why not add an "Environmental Bill of Rights?" Many scholars have suggested this procedure, even though it is probably possible to achieve the same effect with a new statutory law without the time-consuming process required for ratification of a constitutional amendment. Furthermore, the rights enumerated in the National

Environmental Policy Act of 1969 already state that each person should enjoy a heathful environment. Nevertheless, students at Northwestern University Law School in 1969 proposed an Environmental Bill of Rights to be added to the Constitution by amendment. It covered four points:

1. an inalienable right to a clean environment;
2. power to the legislature to pass laws necessary to buy and preserve land in a wild state;
3. power of redress for a citizen if his environment is adversely affected by the government or any other person; and
4. power of a citizen to challenge any governmental action in which the government could not show that its acts would not adversely affect the environment.***

An idea related to the constitutional issues discussed above is the "trust doctrine," which has been advanced by several prominent environmentalist lawyers, including Bernard Cohen and Victor J. Yannacone Jr. (the latter was counsel for the plaintiff in the controversial Everglades airport case). The trust doctrine builds upon a belief that has been upheld previously in the courts; that the land of this nation is held in trust for the public generally. Significantly, the doctrine applies to private land as well as public. There have been cases where the trust doctrine was applied to rights in lands underwater. And in Virginia Cohen has sued parties who seek to construct apartments on wild lands on a basis of violation of the trust doctrine as well as the plaintiff's rights, privileges and immunities under the Constitution.

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* Griswold V. Connecticut, 381 U.S. 479. The case involved the right of a married couple to receive birth control advice. The Supreme Court overruled a state law to the contrary, finding the couple's "right"to privacy" to be implicit in the Bill of Rights.

** Norman J. Landau and Paul D.Rheingold, The Environmental Law Handbook, (N.Y.: 1971), p.38

***Norman J. Landau and Paul D. Rheingold, The Environmental Law Handbook, (N.Y.:1971), p.39

TEACHER COMMENT NO. 26

Bill Would Create Pollution 'Traffic Cops'

By DAVE THOMPSON
(TODAY Staff Writer)

An ordinance that would enable Brevard health officers to act as pollution "traffic cops" will be presented to the county legislative delegation before the 1972 session, says Malcolm McLouth, chairman of the Brevard Environmental Control Advisory Committee.

"This would enable the health department to issue tags for air and water pollution code violations, much as a highway patrolman issues speeding tickets," he said. "Points could be assigned for the violations, similar to the traffic law point system.

McLouth said the proposed system would greatly increase the county's ability to enforce anti-pollution laws.

"This would make it a lot easier to get some action on the small violations. The large violations are easy to spot," he said. "A violator could either pay the tag or take the matter to court, if he felt he was tagged unfairly."

Fines and possible jail sentence could be penalties accompanying the tags.

"There might be a maximum fine of $100," McLouth explained, "but this could occur every day if the violation wasn't taken care of."

The basic idea for the ordinance was presented to county commissioners several months ago and received an enthusiastic reception, McLouth said. County Attorney Bob Nabors was instructed to draw up a model ordinance.

McLouth and Nabors explained parts of the ordinance to the legislative delegation at a Dec. 18 hearing in Cocoa Beach and reaction there also was favorable, McLouth stated.

"We should have the whole ordinance to the delegation by their next session," he said. "To my knowledge, there are few, if any, other government units in the state with such an ordinance. I think it would attract a lot of attention."

"I worked under such an ordinance when I was an air pollution control officer in Minneapolis, and it was extremely effective."

TEACHER COMMENT NO. 27

3-Year Sewer, Water Project Hangs on Aid

By DIXIE SANSOM
Herald Writer

MELBOURNE — Dreams of city water, sanitary sewers, indoor plumbing and paved streets may finally be realized in portions of South Melbourne if federal officials approve a financial assistance application the city of Melbourne plans to submit.

The Melbourne City Council is expected to approve a resolution at Tuesday night's 8 p.m. meeting, authorizing the city to file an application for assistance with the Deparment of Housing and Urban Development for a neighborhood development program.

It would be a three-year project, funded a year at a time, in which an estimated total of 35 acres of South Melbourne which comply with the HUD definition as a "slum, blighted, deteriorated or deteriorating area appropriate for urban renewal project," would be rehabilitated.

CITY MANAGER Earl Watkins and City Planner Ed Washburn began 15 months ago their attempt to qualify Melbourne for such a program, then seeking funds for a three year project.

However, between the time the men began planning the project and an application was submitted, HUD changed its criteria for urban renewal projects and instead of setting funds aside for each community for the projected number of years, projects will be financed one year at a time.

The project planned is still the same, according to Watkins, but the change in funding procedures necessitated a re-submittal of another application and further delays.

Watkins estimates the federal government will fund two-thirds to three-quarters of the cost, originally estimated at more than $2 million.

HOWEVER, some city costs can be rendered through in-kind services such as placement of water and sewer lines and street paving.

"It is the same project that was submitted on a three-year basis, said Watkins, "and it's been approved before.

"I hope it can get approved in 90 days, or by March. Then, four-six weeks after that, the city could begin the in-kind services, probably with the placement of water and sewer lines."

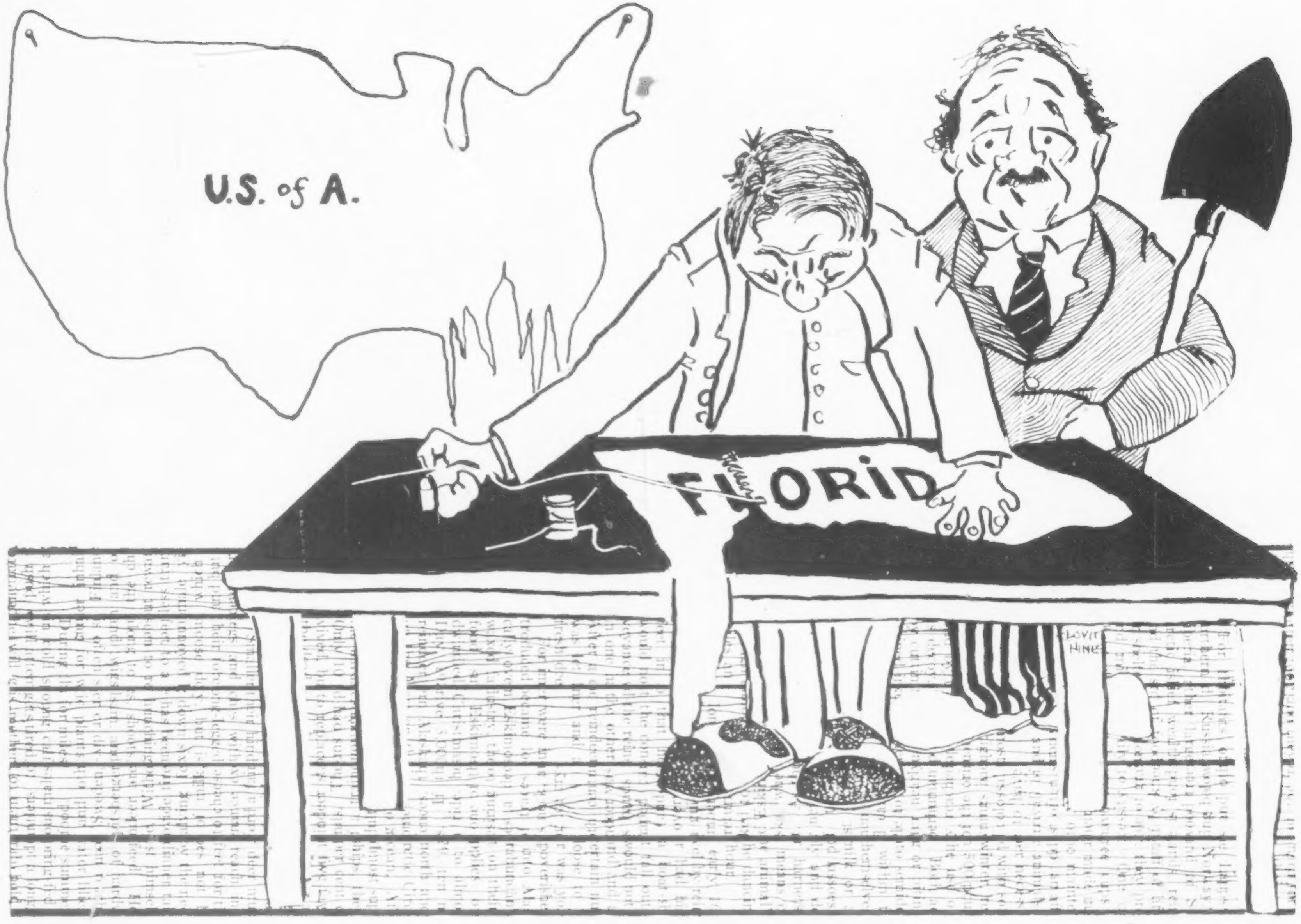
Melbourne may also be the first city in Florida to receive such a grant, as the city manager said to his knowledge, no other city has been approved.

THE PROGRAM would begin with the small area bounded by Florida Avenue on the south, Monroe Street to the west, east to Randolph Street and north to Spain Street, excluding a low-rent housing development in the area.

Grants-in-aid will be made available to the area residents to either relocate their home on rehabilitate their present dwellings, if deemed sound enough.

In other business, the council:

- ● Will discuss requests by the Jaycees to install benches throughout the city and to lease a park site on Eau Gallie Boulevard, near Croton Elementary School.
- ● Will discuss calling a public hearing on construction of sidewalks in the Leewood Forest area.
- ● Hear a report on repairs at Lake Washington dam.
- ● Discuss right-of-way acquisition on Line Street and portions of Eber Road and Hickory Street, through Wasman property. Both sets of property owners have indicated they will give the right of way to the city but would like to be exempt of assessments for future improvements to the property abutting the right of way they donate.


U.S. of A.
FLORID
LOVIT HINES

POLITICAL/LEGAL RESOURCE UNIT TWO: STATE AND FEDERAL GOVERNMENT AND THE ENVIRONMENT

INQUIRY QUESTIONS

I. How can a person determine what state/federal laws affect environmental problems? 85

II. How have the laws enacted by state and federal governments affected the environment? 87

III. Why have additional environmental controls not been enacted? 88

IV. How do state and federal agencies enforce environmental laws? 90

V. How could an individual or group seek redress for environmental damages in state and federal courts? 95

VI. How do environmental control programs rate as priority items in state and federal governmental budgets? 97

VII. In what ways do state and federal governments co-operate in regulating the environment? 100

VIII. How have state and federal governments become polluters? 101

Inquiry Question:

I. How can a person determine what state/federal laws affect environmental problems?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. DISCUSS 1. Have students suggest known pollution problems. 2. List answers on chalkboard. 3. Try to reach general agreement concerning which of these problems is the primary responsibility of the state and which is the primary responsibility of the federal government (some overlapping responsibilities will develop and should be noted).	A. DISCUSS	A. DISCUSS TC # 1, page 146 (participation)	A. DISCUSS
B. RESEARCH 1. From list on chalkboard divide class into 2 major groups: one "state" and one "federal". 2. In each major group, subcommittees should be formed to investigate the existing laws governing specific pollution problems that were listed on the chalkboard. 3. Each group compiles a list of applicable laws and presents to the class by listing on the chalkboard those laws that apply to the pollution problem they have investigated.	B. RESEARCH 1. State environmental laws can be obtained through correspondence with State of Florida, Dept. of Pollution Control, Tallahassee, Florida. 2. Other state laws dealing with air pollution: "A Digest of State Air Pollution Laws" from U.S. Dept. of H.E.W. Public Health Service, National Center for Air Pollution Control, Washington, DC. 20201	B. RESEARCH TC # 4, 5, 6, and/or 7, pages 154-157 (small group)	B. RESEARCH 1. After research is completed research each of the following areas: a. no current laws apply b. current laws are weak c. state and/or federal laws sets differing standards. 2. Large governmental agencies do not respond as rapidly as perhaps the smaller "sub-agencies". 3. Federal agencies might be best contacted by writing the local Congress-

Inquiry Question:

I. How can a person determine what state/federal laws affect environmental problems?

Learning Activities	Resources	Evaluation	Teacher Suggestions
	3. Federal environmental laws can be obtained through correspondence with the United States Environmental Protection Agency; Washington, D. C.		men or Senators.
C. DISCUSS Class discusses laws, notes gaps or flaws in existing laws, and reaches a conclusion to the Inquiry Question.	C. DISCUSS	C. DISCUSS 1. TC # 8, page 158 (listening) 2. TC # 1 page 146 (participation)	C. DISCUSS

Inquiry Question:

II. How have the laws enacted by state and federal governments affected the environment?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. READ Have class read about oil slicks.	A. READ SC # 1, page 108	A. READ	A. READ TC # 2, and 3, pages 147-153
B. DISCUSS Having finished SC # 1, consider this question: Would other existing laws regulating pollution have similar weakness or "loopholes?" How? Why?	B. DISCUSS	B. DISCUSS TC # 1, page 146 (participation)	B. DISCUSS
C. RESEARCH/CREATE 1. Divide class into small groups to search for "loopholes" in existing environmental laws. 2. When a "loophole" or vagueness in meaning is encountered, the group will create a more meaningful law. 3. When no "loophole" is found, the group will summarize the intent of the law and come to some conclusion as to its effect.	C. RESEARCH/CREATE A listing of state and federal laws have been compiled in the previous activity.	C. RESEARCH/CREATE TC # 4, 5, 6, and 7. pages 154-157 (small group)	C. RESEARCH/CREATE The teacher will need to research to find additional examples of weaknesses in laws in the event that students cannot themselves find any in the existing laws they have on hand hand.
D. REPORT/DISCUSS 1. Groups report findings to class 2. Class arrives at general conclusion to Inquiry Question.	D. REPORT/DISCUSS	D. REPORT/DISCUSS 1. TC # 9, page 159 (oral) 2. TC # 1, page 146 (participation)	D. REPORT/DISCUSS

Inquiry Question:

III. Why have additional environmental controls not been enacted?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. READ/DISCUSS 1. Read Student Comments. 2. Having read the SC section listed above, the students will discuss the reading assignments in small groups.	A. READ/DISCUSS 1. SC # 2, 3, 4, 5, and 6, page 109-113 2. Students may wish to use their library facilities, newspaper and magazine articles to further enhance their knowledge.	A. READ/DISCUSS TC # 4, 5, 6, and 7, pages 154-157 (small group)	A. READ/DISCUSS Before the activity actually begins, the teacher might consider giving the Inquiry Question to the students so they could be thinking about it and watching for current information which pertains to it.
B. BRAINSTORM In a brainstorming session in their groups, students will list as many reasons as possible why additional environmental controls have not been enacted.	B. BRAINSTORM	B. BRAINSTORM TC # 4, 5, 6, and 7, pages 154-157 (small group)	B. BRAINSTORM Students should be instructed in the proper exercise of "brainstorming," so that they let their imagination soar and do not stop to analyze or critize at this point. Read TC # 10, page 160.
C. ANALYZE 1. Students will carefully analyze all possible reasons and agree upon the most valid ones. 2. Students will prepare a defense for their choices.	C. ANALYZE	C. ANALYZE 1. TC # 4, 5, 6, and 7, pages 154-157 (small group) 2. If written work is required, collect and evaluate.	C. ANALYZE Students should be told that they must be prepared to defend their decisions before the entire class.

Inquiry Question:

III. Why have additional environmental controls not been enacted?

Learning Activities	Resources	Evaluation	Teacher Suggestions
D. REPORT Each group will report its answer to the Inquiry Question to the class.	D. REPORT	D. REPORT TC # 9, page 159 (oral)	D. REPORT
E. DISCUSS The class will agree upon the most valid conclusion to the Inquiry Question.	E. DISCUSS	E. DISCUSS 1. TC # 1, page 146 (participation) 2. Teacher may give a paper/pencil test.	E. DISCUSS

Inquiry Question:

IV. How do state and federal agencies enforce environmental laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. VIEW/DISCUSS 1. Give each student a copy of "U.S. Government Environmental Activity Chart, Executive Branch" (SC # 7). 2. Have students discuss the following questions: a. Why are so many executive departments and agencies involved in environmental problems? b. What is the apparent relation of the Environmental Protection Agency to the other executive departments and agencies? c. Do you think that the E.P.A. could effectively safeguard environmental problems without the cooperation of other executive departments? Explain.	A. VIEW/DISCUSS SC # 7, page 114	A. VIEW/DISCUSS TC # 1, page 146 (participation)	A. VIEW/DISCUSS TC # 11 and 12, pages 161-166
B. RESEARCH/ROLEPLAY 1. Students will participate in a mock session of the U.S. Senate in which they will be debating and deciding upon the justifiability of the E.P.A.	B. RESEARCH/ROLEPLAY 1. Encourage students to use vertical files, current periodicals, etc. to discover uses which E.P.A. has made of	B. RESEARCH/ROLEPLAY	B. RESEARCH/ROLEPLAY

Inquiry Question:

IV How do state and federal agencies enforce environmental laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
2. See TC # 14, page 169-170 for procedure.	its powers and to evaluate its effectiveness. 2. E.P.A. bulletins, "Toward a New Environment" and "Environmental Protection" may be obtained by writing: U S Environmental Protection Agency, Washington, D C. 20460		
C. DISCUSS Conduct class discussion to evaluate the importance of the E.P.A. in regulating and controlling environmental problems and in enforcing environmental laws. (Seek conclusion to Inquiry Question)	C. DISCUSS	C. DISCUSS	C. DISCUSS
Activity # 2:			
A. READ/IDENTIFY/DISCUSS 1. Have each student read SC # 8, and briefly outline the following provisions of the act: a. legislative intent behind the law; b. Florida's peculiar need for such legislation;	A. READ/IDENTIFY/DISCUSS SC # 8, page 116, (excerpts from Florida Air and Water Pollution Control Act)	A. READ/IDENTIFY/DISCUSS 1. Teacher may collect and evaluate student's outlines. 2. TC # 1, page 146 ,(participation)	A. READ/IDENTIFY/DISCUSS TC # 13, page 167

Inquiry Question:

IV. How do state and federal agencies enforce environmental laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
c. powers and duties of Department of Air and Water Pollution; d. enforcement techniques at disposal of department. 2. Lead class in developing a master list of answers to above points on chalkboard and in discussing each set of answers.			
B. READ/RESEARCH/ROLEPLAY 1. Divide class into five small groups and supply each group with a copy of SC # 9, newspaper article. Have each student read this article. 2. Designate each group one of the following "roles" to play in a class re-enactment of this environmental decision-making case: a. Florida Air and Water Pollution Control Board; b. representatives of ITT Rayonier Corporation; c. representatives of Georgia Water Quality Control; d. members of Southeastern Environmental Council; e. U.S. Corps of Engineers. 3. Each group is to plan his role in preparation for a mock hearing on this case before the Florida Air and Water Pollution Control	B. READ/RESEARCH/ROLEPLAY 1. SC # 9, page 122, (ocean waste-dumping plans opposed) 2. School library current periodicals, newspaper articles, (vertical file), and Florida statues may be consulted to expand student's knowledge of the duties and powers of their particular interest. 3. Students may write to agencies which they are representing to request additional information.	B. READ/RESEARCH/ROLEPLAY 1. Collect and evaluate individual student's notes. 2. TC # 4, 5, 6, and 7, pages 154-157 , (small group)	B. READ/RESEARCH ROLEPLAY 1. Teacher should stress that the situation described in newspaper article is to serve only as a springboard for research and roleplaying. Students should not be confined to the actual facts of this case, but rather should be encouraged to use their imaginations and interpret their roles freely - acting and reacting as they might have acted under this given situation. 2. Have students take notes as they research their roles and encourage them to produce written documents for introduction as evidence at Control Board's hearing

Inquiry Question:

IV. How do state and federal agencies enforce environmental laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Board. Each group should prepare testimony and "mock" documents supporting his interest group for presentation to Control Board. 4. After giving each group adequate time to prepare its case, hold mock hearing before the Control Board. The group roleplaying Control Board should establish a procedure for hearing and elect a chairman to preside over hearing. Following completion of testimony, Board will render a decision.			
C. READ/DISCUSS 1. Students will read SC # 10, newspaper article describing outcome of above case. 2. Discuss outcome of case and compare to decision reached by class members in mock hearing. Include the following questions in discussion: a. How did ITT Rayonier's plans conflict with the Florida Air and Water Pollution Control Act? b. By what authority did the Control Board prevent Rayonier's action? c. Why did the state of Georgia get involved in this case? Do you think that Georgia's involvement affected the	C. READ/DISCUSS SC # 10, page 125 (newspaper article)	C. READ/DISCUSS TC # 1, page 146 (participation)	C. READ/DISCUSS

Inquiry Question:

IV. How do state and federal agencies enforce environmental laws?

Learning Activities	Resources	Evaluation	Teacher Suggestions
outcome? d. Did the U.S. Army Corps of Engineers become directly involved? Under what conditions would it have directly intervened with Rayonier's plans? e. What does this case illustrate about the necessity for interstate cooperation in environmental control? about the possibility for state and federal cooperation in enforcement of environmental laws?			
D. DISCUSS The class will develop a generalization, based on past reading and research, in answer to the Inquiry Question.	D. DISCUSS	D. DISCUSS 1. TC # 1, page 146 (participation) 2. Students may be asked to write an essay in response to Inquiry Question	D. DISCUSS

Inquiry Question:

V. How could an individual or group seek redress for environmental damages in state and federal courts?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1 A. DISCUSS/SOLVE PROBLEM 1. Divide class into small groups from 6 to 10 students. 2. Each student will be given a copy of SC # 11, ("Pattern of Constructive Thinking.") 3. Using the "Pattern of Constructive Thinking" as their guide, students will discuss, research, and arrive at conclusions to the Inquiry Question. 4. Suggested Student Comment #'s 12 through 16, may assist in research.	A. DISCUSS/SOLVE PROBLEM 1. SC # 11, page 127 , ("Pattern of Constructive Thinking"). 2. Suggested Student Comments: - SC # 12, page 129 ("Stubborness Can Pay Off"); - SC # 13, page 130 ("Pepsi Told To Clean Up Dirty Canal"); - SC # 14, page 131 ("Shevin Charges Carmakers Snub Pollution Bans"); - SC # 15, page 132 ("Polluter's Suits by Citizens OK'd"); - SC # 16, page 133 ("What Can The Citizen Do About Air Pollution"). 3. All library resources should be utilized by the students as they attempt to find out what is	A. DISCUSS/SOLVE PROBLEM Groups may be evaluated by TC # 4, 5, 6, and 7, pages 154-157 (small group)	A. DISCUSS/SOLVE PROBLEM 1. Stress that students using "Pattern of Constructive Thinking" should go step by step and not jump over one step until it is completed. 2. Give students a copy of the "Pattern of Constructive Thinking" to have before them as they work. 3. Cassette tape for background information: a. Title- Suing for a Clean Environment. b. Location- May be borrowed from the C.E.E.

Inquiry Question · V. How could an individual or group seek redress for environmental damages in state and federal courts?

Learning Activities	Resources	Evaluation	Teacher Suggestions
	being done or has been done in the past about this problem.		
B. REPORT/DISCUSS 1. Having gone through all of the steps in the "Pattern of Constructive Thinking" and having arrived at solutions for the problem, the groups will report their research solutions to the class. Each groups'solutions will be listed on the board. 2. Group reports will be discussed by the entire class and the class will agree upon a conclusion to the Inquiry Question.	B. REPORT/ DISCUSS	B. REPORT/ DISCUSS 1. TC # 9, page 159 (oral). 2. TC# 1, page 146 3. Students could be asked to outline their groups' work step by step and discuss in writing their groups solutions to the problem. All individual research done by each student should be collected and the student should receive credit for this work.	B. REPORT/DISCUSS

Inquiry Question: VI. How do environmental control programs rate as priority items in state and federal governmental budgets?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. RESEARCH 1. Individual students will select (or be assigned) one of the 50 states and investigate data needed to reach a conclusion to the Inquiry Question. 2. 2 or 3 other students would be organized into a task force to investigate the federal government.	A. RESEARCH 1. Write one of these: a. Individual State Comptroller's Office c/o the State Capitol for funding and taxation data. b. U.S. Government Environmental Protection Agency, Washington, D.C. c. U.S. Government Office of Management and Budget, Washington, D.C. 2. Contact your local libraries for statistical information about state population and principal industries (See "Market Guide" in the reference section).	A. RESEARCH	A. RESEARCH TC # 15, page 171
B. DISCUSS/LIST 1. Through general class discussion, have the students suggest what data is pertainent to investigating the Inquiry Question.	B. DISCUSS/LIST	B. DISCUSS/LIST TC # 1, page 146 (participation)	B. DISCUSS/LIST The list of data topics the students choose to investigate should include these or similar topics:

Inquiry Question: VI. How do environmental control programs rate as priority items in state and federal governmental budgets ?

Learning Activities	Resources	Evaluation	Teacher Suggestions
2. List on the chalkboard.			1. Population 2. Principal industries 3. Total state or federal funds 4. How funds are apportioned 5. Which governmental departments function to control the environment 6. What is each department's share of government funds 7. Indicate the environmental agencies' share of funds broken down four ways (if available): a. Total $ annually b. Total $ daily c. Per capita $ annually d. Per capita $ daily 8. Research to uncover the tax sources that support the environmental agencies in whole or in part 9. What other agencies or departments of state or federal governments compete with environmental agencies for their share of these tax

Inquiry Question: VI. How do environmental control programs rate as priority items in state and federal governmental budgets?

Learning Activities	Resources	Evaluation	Teacher Suggestions
C. PREPARE CHARTS/REPORT/DISCUSS 1. To illustrate their findings students will prepare charts on each state and present them at "Regional Meetings" (small groups of students investigating adjoining states) 2. Discuss results and prepare REGIONAL CHARTS to illustrate REGIONAL efforts in a general report to the class. 3. Class comes to a general conclusion to the Inquiry Question after all reports are given.	C. PREPARE CHARTS/REPORT/DISCUSS Make available necessary "art" material if charts are to be made during class time.	C. PREPARE CHARTS/REPORT/DISCUSS 1. Collect charts and TC # 16, page 172 (visuals) 2. TC # 4, 5, 6, and 7, pages 154-157 (small group) 3. TC # 9, page 159 (oral) 4. TC # 1, page 146 (participation)	revenues C. PREPARE CHARTS REPORT/DISCUSS TC # 19, page 176, may be of benefit to the teacher.

Inquiry Question: VII. In what ways do state and federal governments co-operate in regulating the environment?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. RESEARCH 1. Divide class into three small groups: air--water--land 2. Each group will research the role of the state and federal government and compare the way in which they cooperate and/or conflict or duplicate efforts in each of these areas: legislation--enforcement--finance. 3. Each group prepares an oral and visual report.	A. RESEARCH 1. Rely on previous activities which accumulated data for the state and federal governments. 2. Public libraries can provide copies of state laws, while local offices of U.S. Senators or Representatives can assist in obtaining federal legislation.	A. RESEARCH 1. TC # 4, 5, 6, and 7, pages 154-157 (small group) 2. If written research is required, collect and evaluate.	A. RESEARCH 1. This activity is an effort to correlate date that has been previously collected to show state and federal co-operation in some areas such as air, water, and land resources regulation. 2. This might also be an opportunity to introduce a case study involving all levels of government, such as the Applegate Case Study, Selected Resources, page S- 15 3. TC # 20, page 177-78.
B. REPORT/DISCUSS 1. Each group reports findings to the class with the aid of visuals made in each group. 2. Class decided on a general conclusion to the Inquiry Question.	B. REPORT/DISCUSS	B. REPORT/DISCUSS 1. TC # 9, page 159 .(oral) 2. TC # 1, page 146 .(participation) 3. TC # 16, page 172.	B. REPORT/DISCUSS

Inquiry Question: VIII. How have state and federal governments become polluters?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1: A. READ/REPORT/DISCUSS 1. Divide class into four small groups, and supply each small group with one of the following case studies in which government was a polluter or a potential polluter: a. Florida Barge Canal SC#17, b. Everglades National Park SC# 18, c. Cannikin Nuclear Test SC# 19, d. The SST SC #20. 2. Each group is to prepare a presentation depicting its case study by: a. creating appropriate maps, charts, and/or sketches to depict location and source of pollution in question; b. identifying reasons why government pursued the particular project in question; c. identifying and describing environmental harm which ensued from government sponsorship of the project in question; d. pointing out the value of the American system of "checks	A. READ/REPORT/DISCUSS 1. SC # 17, 18, 19, and 20, pages 135-142 2. School library; current magazines (encourage use of Reader's Guide) newspapers, vertical files, Facts on File.	A. READ/REPORT/DISCUSS TC # 4, 5, 6, and 7, pages 154-157 (small group)	A. READ/REPORT/DISCUSS Background information: 1. TC# 17 and 18, pages 173-175. 2. Cassette tapes a. Titles -Off Shore Drilling -Dangers of Pollution b. Location -May be borrowed from the C.E.E.

Inquiry Question: VIII. How have state and federal governments become polluters?

Learning Activities	Resources	Evaluation	Teacher Suggestions
and balances" in checking government's own pollution in cases in which this factor is relevant. 3. Have each student group make class presentation and follow up with student-led class discussion in which a conclusion to the Inquiry Question is reached.			
Activity # 2: A. RESEARCH/REPORT 1. Have each student select an historical example in which the U.S. or a state government acted without regard for conservation of the natural environment and research his chosen case. 2. In a written report, students will describe the selected historical example of governmental pollution or environmental disregard.	A. RESEARCH/REPORT School library; American history texts, American Heritage, and other relevant books on the American past.	A. RESEARCH/REPORT Collect and evaluate written reports.	A. RESEARCH/REPORT 1. American history is replete with examples of disregard for the environment. Students will find particularly appropriate examples from our 19th century expansion and westernization. 2. Examples which might be suggested to students include: construction of railroads, canals, and national roads; slaughter of the buffalo and other wildlife; depletion of soil with one-cropagriculture.

Inquiry Question: VIII. How have state and federal governments become polluters?

Learning Activities	Resources	Evaluation	Teacher Suggestions
B. DISCUSS/REPORT 1. Divide class into small groups and have students elect discussion chairman. Each group would be given approximately 15 minutes to discuss and record their answer to the topic: "Government as a Polluter: Yesterday and Today". Groups should consider following these questions in discussion: a. How has governmental awareness of the environmental consequences of its actions changed during the past century? Why has it changed? b. Had our forefathers (particularly our national leaders) possessed an environmental conscience, how might our nation differ today? c. What does the U.S. "sacrifice" as it stresses the environmental consequences of its actions? d. Do you think that we as a nation can "afford" to put the environment first? Can we "afford" not to? 2. Have each group chairman report his group's findings to the class, and conclude with a class discussion to reach a concensus	B. DISCUSS/REPORT Students should rely on sources and notes collected in this and previous activity.	B. DISCUSS/REPORT 1. TC # 4, 5, 6, and 7, pages 154-157 (small group) 2. TC # 9, page 159 (oral)	B. DISCUSS/REPORT Membership of groups should vary from membership of groups in part A of this activity so as to increase the reservoir of group knowledge.

Inquiry Question: VIII. How have state and federal governments become polluters?

Learning Activities	Resources	Evaluation	Teacher Suggestions
concerning the Inquiry Question.			
C. DISCUSS Have students arrive at a conclusion to the Inquiry Question through class discussion.	C. DISCUSS	C. DISCUSS 1. Students could be asked to write a conclusion to the Inquiry Question (with or without use of their notes from class discussion) 2. TC # 1, page 146 (participation)	C. DISCUSS

STUDENT COMMENTS

Oil Slick Breaking Up; Navy Bans Future Dumpings

By **HEATH MERIWETHER**
And CLARK HOYT
Herald Staff Writers

As the massive oil slick caused by the Navy off the Northeast Florida coast showed signs of breaking up under favorable winds Thursday, the Navy announced in Washington that it no longer will dump oil sludge or other waste into the ocean or rivers.

The announcement came after congressional charges that the Navy acted illegally when it dumped hundreds of thousands of gallons of bilge oil off the Florida coast Nov. 30.

Secretary of the Navy John H. Chafee sent a letter to Gov. Claude Kirk saying he was "forbidding the barging of any waste materials to sea for disposal."

AT THE SAME time, the Navy released a directive from Chafee ordering that waste oil be sold for refining or to be burned in "approved" burners.

The letter and directive were made public on the eve of an "emergency" Senate hearing today called by Sen. Edmund Muskie (D., Maine), chairman of the Senate Air and Water Pollution Subcommittee.

Muskie charged in a Senate speech Thursday that the Navy dumping was illegal and also violated administrative regulations published two months ago by the Interior Department.

THE FEDERAL law cited by the Navy as its authority for dumping was repealed by Congress eight months ago.

That law, the Oil Pollution Control Act of 1924, required that all dumping take place at least 50 miles from land. Rear Adm. Lawrence Heyworth Jr., commander of Fleet Air Jacksonville, said Thursday that Mayport Naval Station, which dumped the oil off Florida, "has always been meticulous" in following the requirements of the 1924 act.

A Navy spokesman in Washington conceded that the law had been repealed but said that the Navy was not certain that meant the oil dumping was illegal.

The Water Quality Improvement Act signed by President Nixon, on April 3 prohibits the dumping of oil, including sludge, in harmful quanitites within 50 miles of shore. It says nothing about waters farther out.

THE SLICK was reported breaking into patches late Thursday. A thin, 100-acre patch about 10 miles from Jacksoonville Beach was the closest one to the beaches.

The U.S. Weather Service said winds had been fairly light Thursday and the forecast called for winds 10 to 15 miles per hour from the west-southwest today, which should help carry the slick away from land.

The largest portion of the slick was reported 26 miles off Jacksonville Beach and stretched 50 miles down the Northeast Florida coast.

Harmon Shields, state director of marine resources, flew over the slick late Thursday, and said there still were heavy concentrations of oil and cautioned:

"We would like to believe we are better off than we were yesterday, although I don't believe we are out of the woods yet."

THERE WERE no reports of oil within the 3-mile inland waters limit, but five oil-soaked water birds washed ashore late Thursday at Ponte Vedra, a wealthy residential community just south of Jacksonville Beach.

The slick was a threat to the rich shrimp beds of the St. John's River at Jacksonville Beach. The beds produce five varieties of shrimp.

If the oil reaches the beaches, it also would endanger the estuaries, tidal flats and swamplands of the St. John's. The heavy oil would strangle plant life by cutting off a plant's breathing ability, a conservationist spokesman said.

ALTHOUGH dangers to the beaches appeared to have abated, Navy and civilian forces stood ready to fight the slick should it hit the beaches.

"We have 450 people from city, county and local groups ready to go if the slick comes in," Lt. John Seay of the state's marine resources said.

Adm. Heyworth promised all the men and equipment under his command were ready to help against the slick.

Capt. Don Dietz, commanding officer of the Mayport Naval Station, was named by Heyworth to head the task force to work with the state and city governments in fighting the pollution.

Dietz had said earlier that he authorized the dumping because "we were unable to get anyone to take a contract with us to take the oil for reclamation or reprocessing and we had no place to store it."

CHAFEE'S directive will no longer allow this policy.

Sen. Ed Gurney also joined in the congressional uproar over the dumping, sending a telegram to Chafee demanding an explanation.

"In times when we are trying to find solutions to air and water pollution . . . it is extremely discouraging and incredible to learn that one of our governmental departments is engaged in dumping sludge into the ocean," Gurney said.

In Tallahassee, Kirk said he had been advised by the Atlanta regional office of the Federal Water Quality Administration that the Navy would be responsible for any necessary clean-up operations.

STUDENT COMMENT NO. 2

Doing What Must Be Done

Last May 11, Brevard voters defeated a proposal to levy a half-mill county tax to finance a beach erosion control plan.

Last Thursday the Brevard County Commission decided to spend $160,000 as its share for such a project, which will be helped considerably by state matching funds and a federal grant of $320,000 for a total of $640,000.

In taking this action, five commissioners over-ruled the majority voters of all Brevard. Isn't this dictatorship? Socialism?

The May referendum was defeated because not enough people care about Brevard's beaches.

Although the "mainlanders" come to enjoy the beaches on the weekends, they do not want to pay for their perpetuation. Perhaps they figure that if the beach lasts as long as they want to use it, that's enough.

Even the retiree who lives on the beach strip is apathetic. He fishes, plays golf, comes home, has a drink, watches television. He worries not about the beach which is the only tourist attraction Brevard has. He doesn't even care if no tourists ever show up.

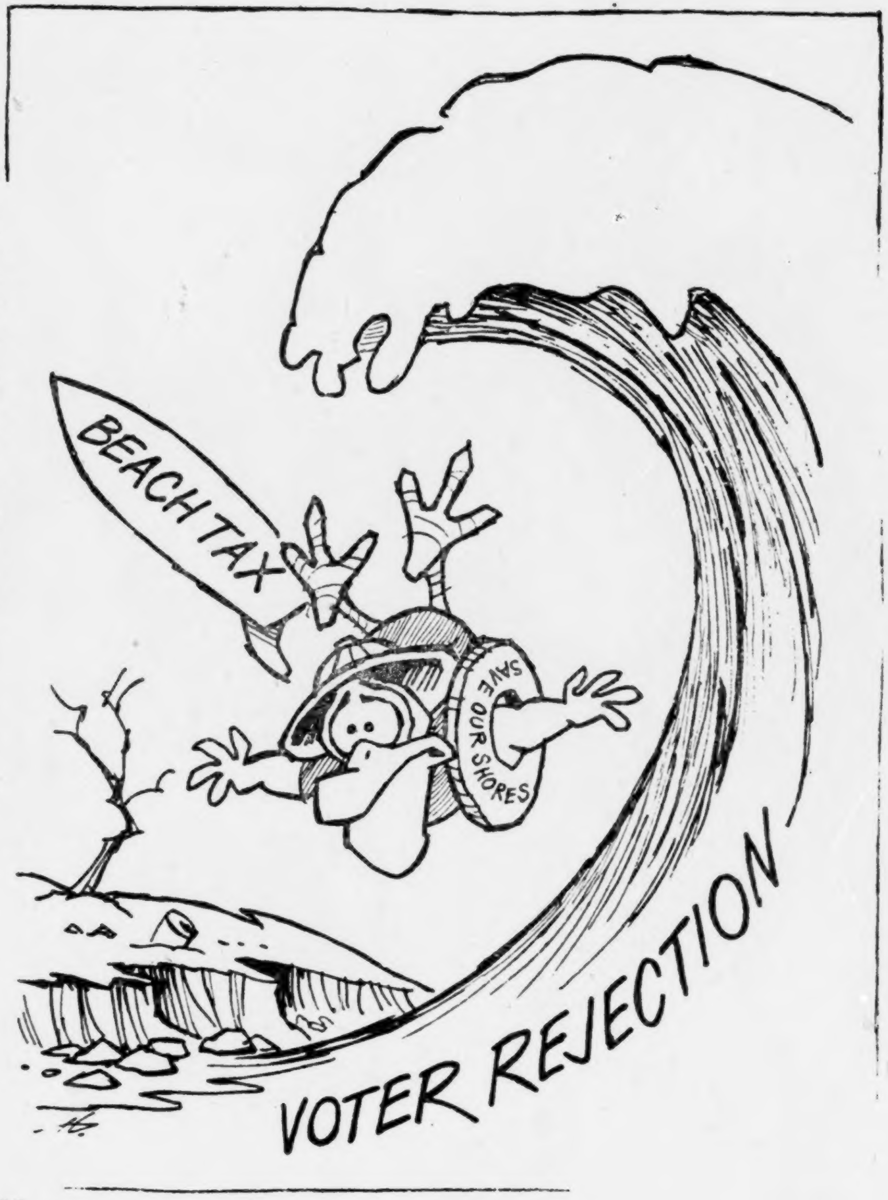
In a nutshell, few care about any one or anything except themselves.

This attitude is apparent far beyond the boundaries of Brevard. In Florida, it crops up when people start talking about the Everglades jet port, the Cross-Florida barge canal, Lake Apopka, the paper mills. Across the nation, it is apparent when people start wondering about Ohio's Cayahoga river, so polluted that it actually caught fire and burned down two bridges.

The average Brevardian, and American, continues on his way unconcerned when told that we consume twice as much oxygen as our plants are producing while destroying one million acres of oxygen producing forests per year; that 1,300,000 Ponderosa pines in the Los Angeles basin actually were killed by air pollution; that while a child is born in the U.S. every nine seconds, a car is produced every five; that motor trucks in Manhattan average 6 m.p.h. while in 1910 horse drawn trucks averaged 10 m.p.h.; that when the average American drinks a glass of water, it has already passed through five other people; that mother's milk contains three to ten times the amount of DDT permitted by law in commercial milk.

When Brevard's commissioners reversed the Brevard voters on the beach erosion referendum, they did so for Brevard's won good.

Wipeout!



STUDENT COMMENT NO. 3

The Rise of Anti-Ecology

"Ecology?" scoffs a black militant in Chicago. "I don't give a good goddam about ecology!" In Georgia, Union Camp Corporation's director of air and water resources, Glenn Kimble, wonders whether mankind will suffer "a whole hell of a lot if the whooping crane doesn't quite make it." Flowery-hatted ladies from the D.A.R. have served notice that concern over pollution "is being distorted and exaggerated by emotional declarations and by intensive propaganda." Such backlash views are now being voiced in many parts of the country, although the protesters often have little more in common than the smoggy air they breathe.

Fancy or Fad. To some critics, the environmental movement resembles a children's crusade of opportunistic politicians, zealous Ivy Leaguers, longhaired eco-activists and scientists who speak too sweepingly and too gloomily. The D.A.R. labels the movement "one of the subversive element's last steps." Members of that element, the ladies add, have "gone after the military and the police, and now they're going after our parks and playgrounds." In the same vein, several newspapers from Alabama to Alaska solemnly stressed the happenstance that Earth Day (April 22) fell on Lenin's birthday.

The Red-plot notion hardly impresses serious critics like University of Chicago Economist Milton Friedman. Instead, they view the environmental movement as a mere fad that will soon vanish, like the War on Poverty. Friedman also decries the tendency of some crusaders to cast big industrial corporations* as "evil devils who are deliberately polluting the air." He argues that the real source of most pollution is the consumer.

Both the leftist Progressive Labor Party and Conservative Columnist William F. Buckley Jr. see the movement as a diversion from more important national priorities. Joining them in this view are many antiwar students who feel that peace far outranks pollution as a protest goal. S.D.S. chapters on many campuses have also publicly embraced anti-ecology because President Nixon is publicly pro-ecology.

Blacks generally are the most vocal opponents of all. Cleveland Mayor Carl Stokes has said that providing housing, clothing and food for the poor should take precedence over finding ways to combat air and water pollution. Says Richard Hatcher, black mayor of Gary, Ind.: "The nation's concern with environment has done what George Wallace was unable to do: distract the nation from the human problems of black and brown Americans."

Other protests are bound to come as industries start to fight pollution. In many cases, marginal operations might indeed be forced out of business when they have to take on the added burden of pollution safeguards. Armco Steel Corp., for example, closed eight old open-hearth furnaces in Houston rather than equip them with costly antipollution devices. This kind of shutdown can cause economic havoc. Some cases:

▶ U.S. Steel Corp. has threatened to close all its plants in Duluth rather than spend $8,000,000 for pollution controls required by the state. A shutdown, city fathers fear, would throw 2,500 people out of work and severely damage the city's economy.

▶ B.A.S.F., an American subsidiary of a large German chemical company, has suspended plans to build a $200 million plastics and dye complex in poverty-stricken Beaufort County, S.C., until it determines just how expensive Government-ordered pollution controls will be.

▶ A recent Federal Water Quality Administration edict against thermal pollution, if strictly enforced, could reduce power production by plants using fossil fuel (oil, coal) and force utility companies to start costly redesign of water-cooling systems.

New Challenge. Most environmentalists agree that ways must be found to help industries and cities pay for pollution control. Says Stanford University Population Biologist Paul Ehrlich: "It should be made perfectly clear that when the Government sets out to ban the use of DDT, society ought to do something to ease the transition for people who previously engaged in the manufacture of DDT." Ecologist Barry Commoner, who heads the botany department at Washington University, goes a step further. "Every one of the ecological changes needed for the sake of preserving our environment is going to place added stress within the social structure," he says. "We really can't solve the environmental crisis without solving the resulting social crisis." Commoner argues that once Americans recognize the problems, they will find proper answers through the democratic process. But those answers require hard economic choices: Who should pay for improving the environment? How can a recession-hit town eject polluting plants at the expense of vitally needed jobs?

The key problem seems to be that the rhetoric of ecology too often makes the subject look like a confused mix of unrelated alarms and issues. In fact, most of the issues are interrelated. The DDT that kills birds and fish may seem remote in importance when compared with the rats and garbage that infest ghetto slums. Yet both DDT and rats directly degrade the quality of U.S. life. Nevertheless, some aspects of the environmental problem are clearly more pressing than others. For example, public-health and land-use planning should rank higher than campaigns against litter and noise. Curbing carbon monoxide in cities is more important than saving caribou in Alaska. For environmentalists, the new challenge is how to retain ecology's holistic view of man and nature while yet recognizing that the movement will soon fade unless it sets priorities that millions of Americans can understand and support.

Reprinted by permission from *Time*, August 3, 1970

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* Last week Attorney General John Mitchell ordered the Justice Department to file suits to bar eight large corporations—including Allied Chemical, Olin, Weyerhaeuser and Georgia-Pacific—from poisoning public waters with mercury.

Who Pays for Anti-Pollution?

In his address on the State of the Union the President not only jumped onto the anti-pollution bandwagon but pushed right into the driver's seat. It could have been an editorial in *Saturday Review* describing how "70 per cent of our people live in metropolitan areas choked by traffic, suffocated by smog, poisoned by water, deafened by noise and terrorized by crime"; Professor Arthur Schlesinger himself never came out more squarely for "improving the quality of life." In the purest noble-savage tradition of Rousseau, Mr. Nixon portrayed "restoring nature to its natural state" as "an aim beyond party and beyond faction." But if his philosophy was a bit wobbly, his politics were as usual right on line. Anti-pollution—"clean air, clean water, open spaces"—is the sure-fire issue of the . . . well, of the season. The President used the unmatchable prestige of his office to grab hold of it. The Democrats—especially poor Senator Muskie, who had been conscientiously boning up on environmental science, ecology and biodynamics, planning to make his run for the Presidential nomination as Mr. Cleanser—ground their teeth, and pleaded that no Republican could really be trusted to wash out the national stable.

The President's speech seemed to make it unanimous for purity, but close in its wake were heard the first faint voices of tentative dissent on this seemingly unchallengeable issue. On a Massachusetts TV program, Mrs. Martin Luther King wondered whether money for anti-pollution might be subtracted from money for ghettos. Was it going to be water rights *v.* human rights? Liberal Democratic columnist Clayton Fritchey suggested the same sort of query: "In the name of fighting inflation, the President is about to veto the HEW bill because it appropriates $1.1 billion more for education that he requested. If this relatively modest sum is inflationary . . . what about Nixon's proposals to spend $10 billion to curb pollution?" Fritchey's figures, as so often with these types, are a fraud as he puts them. The HEW $1.1 billion is an outright appropriation for a single year; the $10 billion is a proposal for a five- to ten-year program, only partly financed by federal funds. Still, as Fritchey sums up, "It's a nice question."

Who *is* going to pay for all the environmental therapy we are now promising ourselves? The general feeling seems to be that They are going to foot the bill: that is, "government" and the despoiler, Big Business. Now it is undoubtedly true that most of the money for any cleaning up of the water, air and land is going to be channeled through governmental agencies or business corporations. Unfortunately this will not mean that They are donating the money for our health, comfort and aesthetic enjoyment. The money paid out by government will come from taxes that *we* pay. With respect to this government-channeled portion of the money, Mrs. King's comment is apt. Since tax payments cannot be infinite, the portion of the tax take assigned to anti-pollution must reduce, relatively, the portion parceled out for other things that we may need or want. The anti-pollution money spent by business, whether voluntarily in response to market demands or under the duress of governmental regulations, penalties and tax incentives, will be in the future, as it has been in the past, part of the cost of doing business and thus translated into the cost of the product or service that we, the consumers, will pay. In paying for anti-pollution, They turns out to be We.

Somewhere along the line, as the initial thrill of the anti-pollution crusade quiets down, these annoying economic constraints will sink into public awareness. We will face the fact that we can't have everything. We want clean air, land and water, but we—*we*—are going to have to pay for it. So we shall then begin asking ourselves: How much do we want anti-pollution, and how much of it, compared to other things we also want? Obviously we want things clean enough so that they won't kill us all off or shorten our lives by half or spread horrible plagues or surround us with intolerable ugliness. To prevent even these extremes in the next generations is evidently going to cost a lot. But are we really ready to pay the multiplied taxes, and zooming bills for electricity, automobile, paper, food, packaging, transport and whatnot in order to get that last 5 per cent of gloop out of the air of our cities so that it will come to our lungs like the zephyrs breathed by Lieut. Zebulon Pike when he reached his peak? Unchlorinated spring water is certainly delicious, but to keep the billions of gallons needed daily by a great city pure and healthy without chemical additives would cost a pretty penny indeed, and maybe we'd prefer spending part of that for . . . well, maybe even for a silly new gadget that strikes our fancy.

However much we spend, we're not going to succeed, in spite of the President, in getting back to a natural nature. For one thing, there is no such thing as a given, static Nature. Nature is the world of time in which all things change, in which oceans change to deserts, ice to mountains, and living species flourish and die by the hundreds of millions. We men, if in spiritual essence transcending her, are also part of nature, altering and shaping nature as nature in turn shapes us. There is no Time Machine that can return us to a clean, pure, idyllic past—which, as it happens, never existed in the first place.

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National Review, February 10, 1970

Pollution Fight Could Wreck U.S. Budget

By ROBERT H. HOVING
Journal Washington Bureau

WASHINGTON — The staggering costs of fighting pollution could wreck the national budget within five years.

That's the warning of Robert P. Mayo, outgoing director of the Budget Bureau.

He said that just to "break even" in dealing with air and water pollution and handling solid wastes, the federal government alone would have to spend at least $100 billion by 1975.

And that's outside the billions that would have to be spent by private industry and local and state governments.

The total estimated annual cost of holding pollution in check apparently will top the yearly amounts being spent on the Vietnam war.

In any event, Mayo said, the expense of preventing the fouling of the nation ultimately will be passed on to the public through more taxes and increases in the prices of consumer goods.

The 1971 budget for the first time includes a five-year revenue and spending forecast. It says that, even if Congress doesn't authorize any new spending, revenues will exceed spending by only $22 billion by that time.

AS A RESULT, there is growing disagreement in Congress on how fast the nation should move on improving the environment. Already, bills aimed at improving the water supplies are bogging down in the House.

"It is virtually impossible at this time to even guess at the amount of financing needed for so vast a national project," Mayo said.

The General Accounting Office reported that, despite the spending of $5.4 billion on water cleanup in the last 12 years, the nation's rivers and lakes are just as polluted as they were before.

Rough estimates of spending figures by Mayo over the next five years include $70 billion on water pollution, $12 billion on dirty air and $27 billion on disposal of solid wastes.

And that is only a beginning, Mayo said. He added: "We also must not forget that, as the nation grows, pollution problems grow right along with it."

ALTHOUGH THE NIXON administration in its 1971 budget seeks to provide "seed money" to speed up the attack on pollution, it expects to shove a larger percentage of the costs onto private industry and local and state governments.

"Those industries that are releasing their waste products into the air or water cannot escape the responsibility for devising ways of manufacturing their products so they won't cause pollution," Mayo said.

He said that local governments "must do their share, because they are in the thick of the battle."

But the twist is that private industry is caught in a profit squeeze and local and state governments — at the end of their tax rope — are looking toward federal funds to fight pollution.

It just isn't there, according to Mayo. "The federal government can't do it all," he said .

REP. GERALD R. FORD of Grand Rapids, House minority leader, shares the gloomy outlook on the federal government's role in fighting pollution.

President Nixon proposed seven major bills to advance this effort in his State of the Union and environmental message to Congress.

The House has approved three-year extensions of the Clean Air Act at $755 billion and the Resource Recovery Act for solid waste disposal at $450 million.

But the House Public Works Committee still is chewing on a Nixon administration proposal for a $10 billion program for improvement of municipal sewage treatment plants in the next four years.

Indicating the pushing off of more of the cost onto local governments is the fact that the federal share of that program would be only $4 billion.

REP. FORD SAID he doubts that any of the administration's four water cleanup bills will be enacted this year.

"There is no question that Congress has been laggard in supplying sufficient funds to cover the federal share of the water pollution control effort," Ford said.

What he is saying is that Congress refuses to put the money where its mouth is.

"The water pollution control legislation languishing in the House Public Works Committee is vital the the massive national attack on pollution of our lakes and streams," Ford said.

"Let's be honest about it," he said. "The individual American is going to foot this huge bill no matter how we decide to assess the cost."

How much is the public going to pay for cleaning up the environment?

"That is the question that must be answered as we embark upon this environmental mission which is going to be more costly than sending men to the moon," Ford said.

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STUDENT COMMENT NO. 6

Do It Yourself Ecology

By REP. PHILIP M. CRANE (R.-Ill.)

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I imagine that those of us who live in the steaming, smog-filled metropolises must find it hard to listen to the accumulated prophecies of environmental apocalypse without getting a nagging feeling that the end is near.

The Cassandras of destruction, always about us, seem to be telling us that if air pollution and poisoned water don't get us, overpopulation will.

Should we all just sit back and prepare for the worst? Or perhaps Thomas Carlyle had it right when he wrote back in 1836, "Do nothing, only keep agitating and things will destroy themselves." I was reminded of this quote by a recent newspaper story that reported that the angry opponents of "pollution" had left 18.2 tons of litter behind in New York City on "Earth Day." This compares to the normal one ton of debris usually deposited in the area in which the protest was held!

In other words, agitation and theory won't save the environment; fact and action will. Right now the battle to save the environment is in the early stages; but until we decide which sectors of the environment will get priority and, most important, who will pay the price, ecology is nothing but rhetoric.

For example, while there is a common feeling about solving the environment problem, many of the solutions are divisive. When Ecology Action buried a new automobile in California, black militants demanded that the car be turned over to them for "the movement." Why, they asked, destroy something worth $2,000 however important as a symbol, when you can convert it into breakfast for thousands of hungry kids? The issue of "environment" obviously divided those in this country who already consume and those who aspire to consume.

How do we solve the problem of saving the environment and saving a system which provides incentives so that those who aspire can earn a portion of the material goods produced in this country?

There are those who say the "capitalist" answers are not likely to prove adequate. E.J. Mishhan of the London School of Economics wants to divert resources from "industrial gadgetry" to public purposes; LaMont Cole, a biologist at Cornell University, says our fundamental problem is our "Chamber of Commerce syndrome, that growth is good"; and historian Henry Steele Commager says, "A society obsessed with the vindication of private enterprise does not nourish a generation dedicated to public enterprise."

This line of thought was summed up recently in an article in *Saturday Review* which concluded, "Historically America rejected general economic planning and broad social welfare systems because there was always the promise of enough for all without them. Now, ironically, we are likely to get socialism, not because, as everywhere else, we couldn't produce enough, but because we may be producing too much —and, by doing so, destroying everything we have."

But these are the men who have long advocated systematic economic planning. Are they truly promoting a solution to our environmental problem as an excuse to promote socialism? Where are these men or the thousands of "Earth Day" participants when the call goes out, as it recently did from President Nixon, to join with government, industry and other interested individuals to "pay their share of the cost" in the fight against pollution and other environment problems?

I personally think the answer to our ecological problems will be provided within our present system—by industry and government and individual citizens working together. Yes, industry is a polluter (so is everyone from the U.S. government to the ordinary citizens and the "Earth Day" protesters). But last year industry spent $2.5 billion to fight pollution of air and water and nature. And this year industry plans to spend $4 billion more to keep up the battle.

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STUDENT COMMENT NO. 7 : U.S. Government Environmental Activity Chart

EXECUTIVE DEPARTMENTS:

Agriculture (supports and conducts research concerning herbicides, air and water quality, pesticides, etc.)

Commerce (supports and conducts biological and physical research of nature's processes, etc.)

Defense (issues permits to regulate discharge of waste into intra-and interstate streams)

Health, Education, and Welfare (health aspects of herbicides, pesticides, toxic substances, waste systems, etc.)

Housing and Urban Development (environmental planning aspects of metropolitan and community planning.)

Interior (studies physical environment, fish and wildlife, water resources and power, land management, etc.)

Justice (advises and supervises suits concerning legal environmental actions)

Labor (coordinates environmental training with other agencies)

State (develops and coordinates international policy guidelines and programs)

Transportation (develops environmental transportation policies, research and reduce aircraft noise)

Treasury (finances of waste treatment facilities-legislation pending)

Office of Management and Budget (monitors environmental progress versus expenditures, etc.)

Office of Science and Technology (comprehensive studies cutting across all agencies)

Council on Environmental Quality (develops and recommends national environmental policies)

STUDENT COMMENT NO. 7 : U.S. Government Environmental Activity Chart

INDEPENDENT AGENCIES:

Atomic Energy Commission (develops standard radiological criteria for environmental control)

Federal Maritime Commission (certifies sea vessels have assets to cover possible clean-up operations)

Federal Power Commission (researches environmental impact of electric power and natural gas industries)

General Services Administration (helps generate procurement specifications for supplies having low pollution potential)

National Academies of Science & Engineering (conducts and supports environmental technical programs)

National Aeronautics & Space Administration (studies for noise control and air improvement)

National Capital Planning Commission (conservation and environmental planning)

National Science Foundation (supports environmental studies and demonstration projects)

Smithsonian Institution (preparing environmental science exhibition)

Tennessee Valley Authority (conducts and supports experimental and demonstration projects)

U.S. Information Agency (conducts international environmental promotion)

Environmental Protection Agency (control of radiation, air, water, solid wastes, pesticides)

1. Establish and enforce national standards.
2. Monitor and analyze the environment.
3. Conduct research and demonstration projects.
4. Assist state and local governments to set up and finance their pollution control programs.

STUDENT COMMENT NO. 8 : Excerpts from Florida Air and Water Pollution Control Act

403.021 Legislative declaration; public policy -

(1) The pollution of the air and waters of this state constitutes a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish and other aquatic life, and impairs domestic, agricultural, industrial, recreational, and other beneficial uses of air and water.

(2) It is delcared to be the public policy of this state to conserve the waters of the state and to protect, maintain, and improve the quality thereof...

(3) It is declared to be the public policy of this state and the purpose of this act to achieve and maintain such levels of air quality as will protect human health and safety, and prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this state and facilitate the enjoyment of the natural attractions of this state.

403.041* Florida Air and Water Pollution Control Commission -

There is hereby created and established the Florida Air and Water Pollution Control Commission, hereinafter referred to as the commission. The commission shall be composed of the governor, the secretary of state, the attorney general, the commissioner of agriculture, and two discreet citizens appointed by the governor and confirmed by the senate. The governor shall serve as the chairman of the commission. Members of the commission shall serve without compensation, but shall be entitled to per diem and travel expenses as provided by 112.061.

403.045 Air and Water Pollution Control Board -

The head of the department of air and water pollution control is the air and water pollution control board. The board shall be composed of five citizens appointed by the governor, subject to confirmation by the senate. The members of the board shall serve at the pleasure of the governor.

403.061 Department: Powers and Duties -

The department shall have the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules and regulations adopted and promulgated by it, and for this purpose to:

(5) Accept state appropriations, loans and grants from the federal government and from other sources, public or private, which loans and grants shall not be expended for other than the purposes of this act.

(6) Exercise general supervision of the administration and enforcement of the laws, rules and regulations pertaining to air and water pollution.

(7) Adopt, modify and repeal rules and regulations to carry out the intent and purposes of this act. Any rules or regulations adopted pursuant to this act shall be consistent with provisions of federal law, if any, relating to control of emissions from motor vehicles.

(8) Hold hearings relating to the adoption of rules to control or prohibit air and water pollution, including hearings upon complaints for violations.

(9) To designate a hearing officer to conduct hearings, who shall have the power to issue notices of hearings, subpoenas, requiring the attendance of witnesses and the production of evidence, to administer oaths and to take testimony as may be necessary or in conformity with this chapter, and such hearing officer shall certify and file with the department, recommendations, findings of fact, and a proposed order; provided, however, that all hearings for the adoption of rules shall be before the department.

(10) Issue such orders as may be necessary to effectuate the control of air and water pollution and enforce the same by all appropriate administrative and judicial proceedings.

(13) Establish ambient air quality and water quality standards for the state as a whole or for any part thereof.

(14) (a) Cause field studies to be made and samples to be taken out of the air and from the waters of the state periodically and in a logical geographic manner so as to determine the levels of air quality of the air and water quality of the waters of the state.

(14) (b) Whenever a study is made or a sample collected which proves to be below the air or water quality standard set for air or water, then the department shall determine the source of the pollution.

(16) Establish a permit system whereby a permit may be required for the operation, construction or expansion of any installation that may be a source of air or water pollution; provide for the issuance and revocation of such permits and for the posting of an appropriate bond to operate.

(17) Consult with any person proposing to construct, install, or otherwise acquire a pollution control device or system, concerning the efficacy of such device or system, or the pollution problem which may be related to the source, device or system. Nothing in any such consultation shall be construed to relieve any person from compliance with this act, rules and regulations of the department, or any other provision of law.

(18) Require that notice be given to it prior to the undertaking of the construction or installation or expansion of any new air or water contaminant sources. Within thirty days of its receipt of such notice, the department shall require as a condition precedent to the construction or installation or expansion of such sources, the submission of plans, specifications, and such other information as it deems necessary in order to determine whether the proposed construction or installation will be in accord with applicable laws, rules and regulations. If within sixty days of the receipt of plans, specifications or other information required pursuant to this chapter, the department determines that the proposed construction or installation will not be in accord with the requirements of this act or applicable rules and regulations, it shall issue an

order prohibiting the construction or installation. Failure of such an order to issue within the time prescribed herein shall be deemed a determination that the construction or installation may proceed; provided, that it is in accordance with plans, specifications or other information, if any, required to be submitted.

403.121 Enforcement: Procedure -

(1) If the department has reason to believe a violation of any provision of this act has occurred, it shall cause written notice to be served upon the alleged violator or violators. The notice shall specify the provision of the law, rule or regulation alleged to be violated, and the facts alleged to constitute a violation thereof, and may include an order that corrective action be taken within a reasonable time. No such order shall become effective except after reasonable notice and the order is served upon the person or persons named therein and a hearing held if requested within the time specified in the notice; except that injunctive relief may be sought as provided under S. 403.131

(2) If, after hearing, the department finds that a violation or violations have occurred, it shall affirm or modify its order previously issued, or issue an appropriate order or orders for the prevention, abatement or control of the emissions or pollution involved or for the taking of such other corrective action as may be appropriate. Any order issued prior to a hearing as a part of a notice provided in subsection (1) of this section, or any order issued after a hearing may prescribe the date by which the violation shall cease by fixing reasonable timetables for necessary action to prevent, abate or control the pollution. If after hearing on an order contained in a notice, the department finds that no violation is occurring, it shall rescind the order.

(3) All testimony taken at any such hearing before the department shall be under oath or affirmation. A full and complete record of all proceedings and testimony presented shall be taken and filed, and upon payment and receipt of all costs or fees allowed therefor, a certified transcript of the whole or any

part of the record shall be furnished to any party in such hearing requesting the same. Upon application of any party, the department shall compel the attendance of witnesses and the production of evidence.

403.131 Injunctive Relief; Emergency Procedure -

If preventive or corrective measures are not taken in accordance with any order of the department, or if the department finds that a generalized condition of air or water pollution exists and that it creates an emergency requiring immediate action to protect human health or safety, the department shall institute proceedings in a court of competent jurisdiction for injunctive relief to enforce this act or rules or regulations or orders pursuant hereto. Such injunctive relief may include both temporary and permanent injunctions.

403.141 - Additional Civil Liability; Assessment of Damages

(1) Whoever causes an unlawful discharge of contaminants into the waters of this state which results in damage to the fish and fish food or other damage to said waters is liable to the state for such damages and the reasonable costs and expenses of the state incurred in tracing the source of the discharge and in restoring the waters to their former condition.

(2) Upon the request of any state agency or the alleged violator, the department may consider and assess these damages. If the amount so assessed is not paid within a reasonable time as prescribed by the department, the department may institute civil action in the appropriate court for a judicial determination of liability and damages.

(3) Nothing herein shall give the department the right to bring an action on behalf of any private person. Nothing herein shall prohibit the department from proceeding forthwith to obtain a judicial determination of the liability and damages. No finding, written report or recommendation of the department made pursuant to this section shall be admissible in evidence in any action.

403.151 Compliance with Rules or Orders of Department -

All rules or orders of the department which require action to comply with standards adopted by it, or orders to comply with any provisions of this act, may specify a reasonable time for such compliance.

403.161 Prohibition, Violation, Penalty, Intent -

(1) It shall be unlawful for any person to cause the pollution of any of the air or waters of this state in violation of or by failure to comply with any order of the department, including orders or rules fixing standards of air and water quality, or permits issued pursuant to its authority.

(2) Violation is punishable by a civil penalty of not more than $1,000.00 for the first offense and of not more than $1,000.00 for each offense thereafter. Each day during any portion of which such violation occurs constitutes a separate offense.

(3) Violation of any order issued by the department is a misdemeanor and is punishable by imprisonment for not more than 1 year or a fine of not more than $1,000.00 for each violation. Each day during any portion of which such violation occurs constitutes a separate offense.

(4) It is the legislative intent that the civil and criminal penalties and fines imposed by the court be of such amount as to insure immediate and continued compliance with this act and rules or regulations pursuant thereto.

* S. 26, ch. 69-106 abolished the control commission and transferred its functions, powers, and duties to the department of air and water pollution control.

STUDENT COMMENT NO. 9 : Ocean Waste-Dumping Plans Opposed

JACKSONVILLE - (AP) - Plans of the ITT Rayonier Corp. to dump 30 million gallons of hot acid wastes daily into shallow offshore waters of the Atlantic Ocean ran into bitter opposition Monday from Florida and Georgia interests.

After receiving protests from the Georgia Water Quality Control Board and the Southeastern Environmental Council (SEC) of Jacksonville, the U.S. Army Engineers announced a two-week extension of the deadline for opponents to state their cases.

Following the new deadline of December 30th, a public hearing probably will be called before a permit is issued for the Rayonier dumping, said the district engineer, Col. A. S. Fullerton.

Rayonier, owned by the International Telephone and Telegraph Co., seeks authority to build two ocean outfalls to pump its paper mill wastes into water 25 to 30 feet deep 2.5 miles offshore from Fernandina Beach. About 3.5 million gallons would enter the ocean at a temperature of 135 degrees, the remainder at 100 degrees.

Conservationists opposing a Florida Power and Light Co. plan to dump hot water from a nuclear power plant into Biscayne Bay testified that damage is done to marine life by effluent temperatures in the 90s.

Mrs. Helen Bird, president of the SEC, told Fullerton it was probable that Rayonier's hot discharges would form "a thermal barrier as far south as Daytona Beach." This, she said, could "decimate commercial and sport fisheries because fish do not cross thermal barriers and thus would not come into our rivers and estuaries where they normally spawn."

R.S. Howard, executive secretary of the Georgia Water Quality Control Board, charged that Rayonier had "seriously degraded" its environment for 30 years and the ocean disposal "would only move the area of degradation from one point to another."

The Rayonier wastes, Howard said, would be dumped within six miles of St. Mary's and Cumberland islands off the Georgia coast, threatening beaches and many square miles of valuable marshlands.

The effluent, Howard said, would be inadequately treated and would be in serious violation of requirements established by the state of Florida under the Federal Water Quality Act.

Mixing and dispersion of the wastes, he added, would be "subject to the capricious ocean currents, winds and tides," and there was no warranted conclusion except that they would "critically degrade extensive areas of marine waters and beaches of Georgia and Florida."

Rayonier spokesman, Jerry Gregoier, said in New York that "we appreciate the responsibility of the Corps of Engineers to investigate this matter. We are confident that the findings will be favorable since the proposed plan has been in the works for several years and has received the approval of the Florida Air and Water Pollution Control Board."

Gregoier, the company's public relations manager, said the costs of the plan would be initially $8 million plus an annual output of abour $700,000. "We believe this is the most expensive such program ever attempted for a southern pulp mill," he said.

Rayonier and another Nassau County mill, Container Corp. of America were given citations to clean up in 1967. Since then, Container has spent $60 million to give full treatment of its effluent.

Not until last December did Rayonier submit a proposal to build outfalls to the ocean. Previously it had dumped 2.5 million gallons in the ocean and the rest into the Amelia River, which winds up in the Atlantic. It pulls 30 million gallons of fresh water daily from underground sources.

The U.S. Department of Interior has recommended that no more ocean outfalls be built and the national Water Quality Act requires that applications for them may not even be considered unless approved by the state.

The Florida Air and Water Pollution Control Board rejected and later approved the Rayonier proposal.

Asked on what grounds okay was given, the man in charge of construction permits, Frank Watkins, said he understood it means "an improvement on what they're doing now."

With the state's approval, the Army Engineers then notified state agencies and conservation groups that protest would be heard until December 15.

Mrs. Bird told Fullerton that President Nixon's Council on Environmental Quality had specified that ocean dumping of sludge "should be phased out and no new sources allowed."

"How shocked we were when the Navy dumped 500,000 gallons of waste about a week ago," Mrs. Bird said in her letter. "Yet this plan would allow Rayonier to dump 30 million gallons a day! What a double tragedy to waste the precious fresh water and to inflict the acid wastes it would carry into the marine environment."

The enormous use of water in the area, she said, already has caused serious salt water intrusion into underground supplies.

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(The Florida Air and Water Pollution Control Baord met again to reconsider its decision in this matter after the above article was published. You are to re-eanct this third - unreported - meeting of the Board.)

The following article appeared in The Miami Herald on December 15, 1970.

STUDENT COMMENT NO. 10 : State Vetoes Plans for Acid Waste Dump at Sea

FERNANDINA BEACH, (AP) - With apologies to Georgia, the State of Florida canceled Thursday the plans of a giant paper mill to dump 30 million gallons of acid wastes daily into the Atlantic Ocean.

Georgia officials and conservationists had mounted an outspoken protest, claiming that the effluent from the ITT Rayonier plant at Fernandina Beach would have turned a portion of the Atlantic near the Georgia-Florida border into a "dead sea."

"I feel a lot better now," said Nat Reed, chairman of the Florida Pollution Control Board, after notifying the company that an operating permit approved last May would be withdrawn. "We made a mistake, but when you make a mistake you shouldn't stand by it."

"Nothing ever bothered me so much in my life. I agonized over it all during the holidays. The problem was the jobs of 650 men."

First word that Florida had pulled back its certificate came from Executive Secretary R.S."Rock" Howard at a meeting of the Georgia Water Quality Control Board in Atlanta. He said Reed had canceled the plant plan and had apologized personally.

"I apologized to Rock because it had never crossed our minds that the discharge would affect the water quality of the State of Georgia," Reed said.

Mrs. Helen Bird of Jacksonville, president of the Southeastern Environmental Council which had launched a heavy attack on the ocean dumping proposal, called the state action "one of the outstanding victories for conservation ever won in the nation."

Officials of the International Telephone and Telegraph Co., owner of the Fernandina Beach plant, near the Georgia-Florida border, declined immediate comment. They have denied in the past that the proposed ocean outfalls would harm marine life.

Howard said the Rayonier plant -- which produces cellulose products and is Nassau County's largest employer -- had "killed the Amelia River by dumping untreated waste for 16 years." He said the proposal to dump effluent with a thermal reading of 104 degrees 2 1/2 miles off shore in the ocean would kill beaches and marshlands of Georgia.

Because of a flood of protests, the U.S. Army Corps of Engineers had planned a public hearing before issuing its own permit. Reed's action made this unnecessary, because prior state approval is required before the Corps can authorize construction.

The preceding article appeared in Today on January 8, 1971.

STUDENT COMMENT NO. 11 : Pattern of Constructive Thinking

Step I Identify the Problem

1. Agree on the goals you are seeking.
2. Be sure each member of the group understands the wording of both the problem and the goals.

Step II Analyze the Problem

1. Explore the nature and worth of the goals.
2. List all the possible barriers to the goals.
3. Research the problem and find out what has been done or is being done about it now.
4. Consider and discuss what will happen if nothing is done about the problem.

Step III Suggest All Possible Solutions

1. Suggest ALL possible solutions. The greater the choice, the better are the chances of getting the best solution. Be creative! Brainstorm for possible solutions. Don't be critical at this step, just suggest any and all possibilities.
2. Solutions are possible ways to remove the barriers to the goals or get around the barriers in some way or revise the goals in light of the barriers if they are insurmountable.

Step IV Select The Best Solution or Solutions

1. Think through and discuss all of the possible solutions which have been suggested. Weigh and compare the good and bad points of each suggestion.
2. Decide on the solution or solutions which the group finds to be the most desirable.

Step V Suggest Ways to Implement the Solution

1. Decide how you can put the solution into effect. This is the "how to get it done" step.
2. Just what will it take to put your solution into effect: Will you have to: (a) change the law (b) study more (c) secure more money etc?

Notes on Using the "Pattern of Constructive Thinking"

1. It is designed to be used by groups of not over 12 students.

2. It is designed to be used in a free democratic type of group discussion where each student must assume his fair share of research and discussion.

3. The group should select a group leader and group recorder. The leader will simply help get them started each day and will see that they are following the "Pattern of Constructive Thinking" on a step by step basis. The recorder will keep a daily record of what the group decides on and where they begin and stop each day. This will be the "official" record.

4. Each student should keep his own record of daily activities and prepare himself for the next days activities in advance.

5. Always remember that co-operation is essential for the group to function well. Always show respect to each member of the group and encourage each member to participate fully in the groups work.

STUDENT COMMENT NO. 12

Stubborness Can Pay Off

GREENSBORO, N.C. — "There's no power without perseverance" may well be the central lesson of the environmental movement. It is a fact that many of the ecological disputes being won in the courts and Congress today were "lost causes" a decade ago. What transformed them from losers to winners was the sheer stubborness and skill of organized environmentalists.

A potential case in point is the free-for-all over the New Hope Reservoir project near Chapel Hill, N.C. Originally proposed by local boosters in the 1890s and revived after a 1945 flood on the Cape Fear River, the New Hope Reservoir is a classic, $38 million boondoggle. The U.S. Army Corps of Engineers launched it at a time when nearly everyone loved dams, and now, despite impressive signs that the reservoir will become a cesspool, the corps is dourly plodding ahead.

But North Carolina's environmentalists are at least as determined as the corps — and their pluck is beginning to pay off. A year ago one of them wrote: "I don't think there is a prayer of stopping the dam." Now he thinks the North Carolina Conservation Council (NCCC), a university group called ECOS and other ecology organizations have a fighting chance in the Richmond, Va. Circuit Court of Appeals.

What provokes his optimism is a series o devastating attacks on the corps' "cost-benefit" logic for the New Hope project. The corps concedes that its dam will flood 14,300 acres of forest, farms and wildlife habitat (30,000 acres at flood crest), but against this loss it stacks the following "benefits": (1) flood protection, (2) a stable water supply and "pollution dilution" flows for downstream cities on the Cape Fear River and (3) public recreation.

Typically, the corps has tried to behave as if NEPA did not exist. Wilmington District Engineer Col. Paul Denison at first argued that the 1970 law did not apply to existing projects. Then, faced with a lawsuit, he patched together a bunch of dusty New Hope documents and labeled them an "environmental impact" statement under NEPA. "If compiling and issuing a statement will make people happy," Col. Denison snapped, "then that's what we'll do." Mean- Meanwhile, the corps continued to bulldoze land; the reservoir is now one-third complete.

Each of these alleged benefits has been called into serious question by local environmentalists, the U.S. Forest Service, U.S. Bureau of Sport Fisheries and Wildlife and the Environmental Protection Agency (EPA). Wildlife experts criticize the corps for failing to deduct the loss of natural habitat from the recreational delights of the reservoir. The NCCC and ECOS site impressive evidence that the corps has overestimated both the frequency of floods and the need for flood control in the New Hope area. And in a damaging thrust at the "pollution dilution" idea, EPA argues that downstream industries and cities now have the ability to clean up their own wastes; they don't need big slugs of water to flush them away.

But the strongest case against the New Hope reservoir is that it will become virtually a cesspool, choked with algae and robbed of oxygen by pollutants flowing into it from the Haw and New Hope rivers. While North Carolina's Department of Water and Air Resources has promised to deal rigorously with polluting industries and towns on these rivers, it has precious little to show for its bold talk so far. As a result, says the U.S. Bureau of Sport Fisheries and Wildlife, "we can only conclude that the reservoir and tailrace may become the scene of massive fish kills."

The weapon which gives all these criticisms a deadly aim is the 1970 National Environmental Policy Act (NEPA). Not only does NEPA require a searching analysis of the true environmental costs of projects like New Hope, but it also forces a rigorous weighing of the alternatives. Among the alternatives proposed by local conservationists: a "dry" New Hope dam to be closed only during floods or no dam at all.

Increasingly sure of their ground and angered by Denison's slapdash NEPA statement, local conservationists filed suit against the corps last summer. Their suit is getting a judicial back-of-the-hand at the U.S. District Court level, but its chances on appeal look bright.

Bulldozing or no, this boondoggle can be stopped. President Nixon, after all, ordered a halt to the Cross-Florida Barge Canal when it was nearly a third finished. The Administration has also agreed to reevaluate its huge Tocks Island project on the Delaware River. And even more germane, from the viewpoint of North Carolinians, is a federal judge's decision against construction of the Cossatot River dam in Arkansas; the corps, said the judge, failed to comply with NEPA.

Like the Cossatot River dam, the New Hope project is one lost cause that may yet turn into a big victory for environmentalists

Pepsi Starts Cleanup Of Polluted Canal

MIAMI (AP) — Pepsi Cola Bottling Co., under a federal grand jury indictment charging pollution of the Miami River, is taking steps to clean wastes which a pollution official says are so dirty they are "not acceptable to our sewer system."

A large part of the problem should be solved within a week, said Pepsi's pollution consultant, Paul Leach.

The 19-count indictment charges that the Pepsi plant has poured oil, grease, settleable solids and fecal matter into the Dressel Dairy Canal, which flows into the Miami River.

The company paid a total of $1,400 in fines on similar charges filed by Dade County last June and has been named on other complaints by the county. It also is the object of moratorium by local ecology-minded people who have declared a boycott of Pepsi products.

James Redford, chairman of the South Florida Izaak Walton League, said 7,000 signatures have been collected from people who are refusing to drink Pepsi products.

Leach, the former pollution control director for Dade County, was hired by the company Monday to tackle the problem. He heads a private consulting firm.

Leach said the presence of fecal matter is "a complete mystery. We have no idea how it could get there. All toilet facilities in the plant flow into cesspools and none goes into the canal discharge pipe."

Pepsi this week installed a device which takes sludge out of the water, Leach said, and he's also been working to "restructure" the present system for collecting oil, grease and settleable solids.

A group calling itself the "Uncola Underground" attempted this week to cement shut a 24-inch wide drainage pipe leading from the bottling plant into the Dressel Canal.

"It's about time someone did something about Pepsi Cola, and we did it," an anonymous caller said.

The moonlight attempt failed because the cement did not have time to set.

The federal indictment followed a joint investigation by the county agency and the federal Environmental Protection Agency.

If found guilty on all counts, Pepsi would be liable to fines totaling $50,000.

The company is to appear before the Pollution Control Board Jan. 27 and is to be tried in Dade County Court Feb. 4 for 11 pollution charges similar to those in the federal indictment.

SHEVIN CHARGES CARMAKERS SNUB POLLUTION BANS

TALLAHASSEE (AP) -- Atty. Gen. Robert Shevin Wednesday filed a federal anti-trust suit against four major American car-makers, charging they conspired to restrain trade in motor vehicle pollution control equipment.

Named in a 12-page suit filed in U.S. District Court here were General Motors, Ford, Chrysler and American Motors.

Shevin charged the four, along with the Automobile Manufacturers Association, engaged "in a combination and conspiracy in restraint of interstate trade and commerce in motor vehicle air pollution control equipment."

The attorney general said the activity violated U. S. anti-trust laws.

He asked the court to order automakers to recall every motor vehicle manufactured since 1953 and install air pollution devices "at no cost to the present owners."

The "big four" automobile companies since 1953 have conspired to eliminate all competition among themselves in the research, development, manufacture and installation of motor vehicle air pollution control equipment, Shevin charged in his suit.

Shevin also alleged they conspired to "eliminate competition in the purchase of patents and patent rights from other parties" involving control devices.

In addition to recalling automobiles, Shevin asked the court to order the four firms to pay damages to the state to make up for "costs to the state to control air pollution, costs to citizens, counties and cities for medical and health care necessitated by air pollution, and hindrance to the state's economy."

Shevin said the court should decide how much damage was involved. No hearing date has been set.

In filing the suit, Shevin said, "The case is extremely important in setting forth the broad common law powers of this office." He said in the near future he would "move into other antitrust and consumer protection areas."

Shevin said Florida has nearly five million motor vehicles on its street and highways serving a population of 6.8 million. He said motor vehicles are the "major source of air pollution in the United States."

Similar suits have been filed in 15 other states.

Shevin charged the level of pollutants emitted into the air by automobiles manufactured by the four firms was "substantially greater" than the level which could have been attained under existing technology.

STUDENT COMMENT NO. 15

Polluters' Suits By Citizens OK'd

TALLAHASSEE (AP) — Acting on a package of conservation bills, the Senate Monday voted to allow citizens to bring lawsuits against polluters.

The bill, passed by a 34-8 margin, was amended, however, and that kept it from going to the governor before another trip to the House.

The amendments require those bringing the suit to give 30 days notice to the prospective defendants, and also require the loser to pay all attorneys fees and court costs.

The bill allows "class action" suits against polluters. These suits could be brought by citizens who were either directly or indirectly affected by the pollution. The proposed law would allow such suits to be brought against either private businesses or government-run operations such as waste treatment plants.

The action came as the Senate devoted most of the day to conservation measures — many of them bills which have already passed the House.

By a 38-2 vote, the Senate adopted a bill by Sen. Lee Weissenborn, D-Miami, to require 2 percent of the state's first four cent gasoline tax be used in the battle against aquatic weeds that choke Florida's lakes and waterways.

Estimated to raise $1.75 million a year, the bill would involve a portion of the taxes that are presently being paid by boaters but "are being used for road building purposes that have nothing to do with boating," said Weissenborn.

The lawmaker said Florida was "losing the battle" against elodea and water hyacinths, and Sen. Mallory Horne, D-Tallahassee, said the passage of the legislation was essential to preserve what we have left of our fresh waters."

Other action included:

- Passage by a 37-4 vote a bill allowing the Department of Natural Resources to charge $5 an acre on new oyster leases. Existing leaseholders who are paying the old price of 50 cents an acre per year were "grandfathered in" for ten years.
- Adopted 23-17 a bill allowing the Department of Natural Resources to establish coastal construction setback lines on a county-by-county basis.
- Adopted 36-2 a bill requiring installation which may "reasonably be expected to be a source of air or water pollution" to obtain permits from the Department of Pollution Control.
- Passed 41-0 a bill allowing the Department of Natural Resources to import fresh water fish and game "for the purpose of conducting experiments in aquatic weed control."
- Voted 41-0 to authorize the governor to proclaim extraordinary fire hazards because of drought and to allow him to restrict the movement of people in those areas. The bill has already passed the House and now goes to the governor.
- Adopted 33-7 a bill authorizing the Game and Fresh Water Fish Commission to conduct research to develop the farming of alligators in captivity.

STUDENT COMMENT NO. 16 : Air Pollution and Lawsuits

A private citizen or an incorporated Clean Air Committee may bring a lawsuit or class action against other private interests which pollute the environment. But can they take action against the government --city, county or state? Under certain theories of law, they may.

Many states allow local Clean Air committees to testify on behalf of the State Air Control Board when it is involved in a lawsuit with a polluter. In some states the State Board must take the initiative against the polluter; in others the burden is placed on the polluter who wishes to challenge a Board order. In either case, individuals and conservation organizations have the right to express their feelings and defend their rights against the polluter of their environment.

A concept known as the trust doctrine enables citizens or groups to sue the government under certain circumstances in order to assure a clean environment. Under this doctrine, the state, county, city or even federal government are considered a fiduciary for the people; that is, a "person" to whom property is entrusted to hold, control or manage for another. The assumption is that the citizens of the United States are the ultimate "owners" of all land --public and private --and as such may exercise their proprietary rights to safeguard the quality of the environment. In 1892, the Supreme Court rules that "the state holds the title to the lands under the navigable waters...in trust for the people of the state that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty to fishing therein freed from the obstruction or interference of private parties."* The Supreme Court of the State of Florida has also upheld the trust doctrine, and the right of the people to compel the government to protect their rights to a clean environment.

The right of the people to enjoy an unspoiled environment is based not only on the trust doctrine, but on a civil right derived from the Bill of Rights and the 14th Amendment to the United States Constitution. Many attorneys believe that a Civil Rights Act enacted by Congress in 1871 guarantees such a right. This interpretation is built primarily on the ninth and 14th amendments. The ninth amendment declares that the enumeration of certain rights in the Bill of Rights did not deny the existence of other rights, not expressedly stated, which reside with the people; many have argued that a clean environment is precisely such a right. The 14th amendment forbids the governments of states, counties or cities from depriving citizens of property without due process of law; therefore, any failure by these governments to enforce the federally-protected civil right of its citizens to a clean environment constitutes a violation of the 14th Amendment. Furthermore, if a state grants property rights to a polluter without taking action on behalf of citizens affected by the pollution, it is not extending equal protection under the law to all its citizens -- thus violating another part of the 14th Amendment.

A private organization or citizens' group can increase its effectiveness by incorporating itself. Environmental groups, as educational and public-minded organizations, may apply for non-profit corporate status. They may also qualify as tax-exempt organizations, in which case all contributions to them are tax deductible -- an obvious financial advantage. Such groups may retain their tax-free status when involved in public lawsuits against polluters, or even private lawsuits, so long as the objective is simply an injunction against the polluter. A tax-exempt environmental group may not, however, assist in legal action where an individual seeks payment of damages.

*Richard T. Marshall and Larry H. Schwartz, "What Can the Citizen do About Air Pollution?", The Environmental Law Handbook, (N.Y.: 1971), p.121

STUDENT COMMENT NO. 17 : Cross-Florida Barge Canal

A clear instance of government action which endangered the environment was the construction of the Cross-Florida Barge Canal. Conceived in 1942 as a means of shortening the shipping distance from the Atlantic seaboard into the Gulf of Mexico, the artificial waterway was to be carved 107 miles across north-central Florida, from Palatka on the St. Johns River, down the Oklawaha River and on to the Gulf near Yankeetown. The 150-foot wide, 12 foot deep canal was to be excavated by the Army Corps of Engineers, an agency of the government which is employed in projects such as flood control, drainage of wetlands and canal building. As plans were developed, the project enjoyed almost unanimous support at all levels of government -- Florida's Congressional delegation, the governor, influential state legislators and the President. Supporters predicted appreciable economic benefits for shippers, manufacturers, and land-owners. Construction began in 1964. Seven years --and some $50 million in public tax funds later--nearly one-third of the waterway had been completed, and it had reached the Oklawaha River.

One of the few remaining wild rivers in the nation, the Oklawaha meanders through a mile-wide valley blanketed with a thick subtropical hardwood forest which supports a wide range of wildlife. The river itself abounds with fresh water fish, and the valley is an important stopping place along migratory routes of many North American bird species. All this was threatened by the continued escavation of the canal by engineers. Already a stretch of the Oklawaha had been converted into two stagnant weed-choked ponds. Trees stood dead or dying, and the swamps glowed with the blaze of hardwood logs.

Citizens of central Florida became increasingly concerned about the destructive swath being carved across the peninsula. But what recourse did they have against an agency of the federal government? An Orlando-based conservation group known as the Florida Defenders of the Environment rallied public opinion against the canal, arguing that environmental damage caused by the canal would far outweigh its economic benefits, because it would destroy the area for tourism -- an important source of revenue. Finally, the group sought the assistance of the Environmental Defense Fund, Inc., of New York, a group of lawyers formed to help citizens file damage suits in pollution cases. Acting in behalf of the Florida Defenders of the Environment, the Environmental Defense Fund attorneys filed suit against the Corps of Engineers. The Corps claimed as a government agency it was "immune" to such suit, but U.S. District Court Judge Barrington D. Parker found for the plaintiffs, ordering a halt to canal construction on the grounds that irrevocable injury might occur to the swamps and the river. The judge further pointed out the inconsistency of Congress in approving a project which damaged the environment at the same time it was launching programs to protect the environment. Four days later President Nixon ordered construction halted.

The case of the Cross-Florida Barge Canal provided graphic evidence for the fact that concerned citizens can successfully hold their own government accountable for actions which threaten the environment.

STUDENT COMMENT NO. 18 :Everglades Construction Projects - Corps of Engineers

In today's age of "ecological enlightenment," the government would appear to bear primary responsibility for protecting the environment. Much has been done in this direction. Paradoxically, however, the same government which combats pollution continues to disrupt the environment in other instances.

Take, for example, the serious disturbance caused to the ecology of South Florida by the Army Corps of Engineers. A government agency which is employed to "improve" the environment through such projects as draining marshlands, building levees and straightening and dredging rivers, the Corps has acquired a reputation for proceeding with its projects regardless of possible negative environmental consequences. In this case, the Corps set out to drain wide expanses of land in the swamps north of Everglades National Park. Before man intervened, the area possessed a delicately balanced ecosystem with a natural filtration system from the marshes to the sea. A wide variety of plant and animal life was supported within this environment, including the now nearly-extinct Everglades kite and wood stork.

Ecologist Frank C. Craighead, sponsored by the National Geographic Society, has made extensive studies of the South Florida ecosystem. He pointed out that the canals constructed by the Army Corps of Engineers bypassed the natural filtration of the marsh, causing water to rush to the sea and deposit tons of organic ooze in coastal bays. This posed a serious threat to the fishing industry. Furthermore, during the rainy years of 1968-70, the engineers almost "drowned" the Everglades, as water far in excess of the swamp's natural filtration capacities was suddenly sluiced into it through openings in levees. The rising water level destroyed much marsh vegetation and wildlife. Ironically, the situation was reversed in 1971, when severe drought, aggravated by the engineers' flood-control measures, killed much wildlife and threatened the water supply of South Florida. Fires ravaged the parched marshlands.

It can thus be seen that one arm of the government, the Army Corps of Engineers, was responsible for the despoilage of an area (Everglades National Park) supposedly under government protection. Dr. Craighead warned that such destruction could be expected to recur until ecology was given equal consideration as engineering in government construction projects.

STUDENT COMMENT NO. 19 : Conflict Over Underground Nuclear Tests

The conflict of environmental protection groups and proponents of nuclear development for national security was apparent in the controversy surrounding the test of a five-megaton nuclear warhead under the Aleutian island of Amchitka (off the coast of Alaska) in the fall of 1971. News that the Atomic Energy commission had received President Nixon's approval to detonate a test bomb known as Cannikin gave rise to severe objections from environmental groups in three nations. AEC Chairman James R. Schlesinger commented that "some objections have been raised on environmental grounds." His remark was an understatement. In addition to opposition in the United States, vigorous protests were heard from Japan and Canada. Canadian Foreign Minister Mitchell Sharp stated, " Canada and other nations threatened will necessarily hold the United States responsible for any short or long-term effects of this test."

The fears of the environmentalists centered around three possibilities. First, seismologists (scientists who monitor earthquake activity) feared the explosion could trigger an earthquake. (The Aleutian Islands form part of an active earthquake zone which wreathes the Pacific Ocean.) Secondly, it was feared that the blast might generate a tsunami, or giant sea wave, which might inundate the shores of Japan, Hawaii and western North America. And third, conservationists saw a danger of radiation leakage which could contaminate fishing waters around Amchitka and endanger the bald eagles (already a threatened species), peregrine falcons and sea otters which inhabit the island.

Replying to these charges, Schlesinger said he believed the odds on an earthquake or tidal wave were one in 10,000. "Environmental damage has been exhaustively considered, and overriding requirements of national security have, of necessity, taken precedence," the AEC head concluded.

A device similar to Cannikin, called Milrow, was detonated beneath Amchitka in 1969. It caused no discernible environmental damage. A study by the National Oceanic and Atmospheric Administration revealed no evidence of an increased danger of earthquakes in the area after the blast; in fact it found the area to be relatively stable. Opponents of Cannikin criticized the study, observing that Cannikin was more than three times more powerful than the 1.2 megaton Milrow.

The test was designed to measure the explosive force and X-ray yield of the Spartan missile warhead which is to be used in the Safeguard ABM system. The X-rays are intended to deactivate enemy warheads when they are intercepted above the atmosphere by the ABM projectile.

Claiming the AEC had not given sufficient consideration to environmental hazards, seven environmental groups, including the Committee for Nuclear Responsibility, attempted to obtain a court injunction against the test. They failed. A U.S. District Court ruled that the dangers had received proper consideration. As the attorney for the plaintiffs considered an appeal, preparations for the test continued. The warhead was secured at the bottom of the 6,000 foot test shaft, and the shaft was sealed. A postponement would have cost the government an estimated $50 to $100 million. Fishing boats were warned away from the area, and an injunction appeared unlikely.

STUDENT COMMENT NO. 20 : Supersonic Transport (SST)

A few years ago, a Lockheed F-104 Starfighter was flying over the glass and stainless-steel terminal building at Uplands Field in Ottawa, Canada. The pilot decided to "buzz" the airport. The plane dove to a low level and flashed across the runways, traveling over 1000 miles per hour. BOOM! The beautiful terminal building was largely destroyed. Glass fragmented and walls collapsed; ceilings fell to the ground; window frames popped out; beams twisted, doors were unhinged. There was over $300,000 in damages.

This incident represents a major problem now facing the United States airline industry. A jet plane flying faster than the speed of sound creates a sonic boom. In the past, these booms were attractions at air shows and attention getters used by flying teams. Today they are a major threat to commercial supersonic flight and an ear-splitting hazard to our environment and to public health.

A supersonic transport (SST) is being developed as a joint project by the British and French governments, and is expected to be in commercial service by the mid-1970's. With engines producing thousands of pounds of thrust, the SST promises a revolution in air travel by slashing through the sky 12 miles above the earth, outracing the sun at 30 miles per minute. The most remote places in the world will be no more than 12 hours away. One expert estimates that the world's airlines will need more than 500 SST's by 1990. From one point of view this represents progress. From another, it is decidely a "mixed blessing."

Every airplane, including the paper variety made by schoolboys, pushes air aside as it moves. This usually is not a problem because air moves out of the way at much less than the speed of sound. The speed of sound (Mach-1) at sea level is about 768 miles per hour.

An airplane, however, may move at supersonic speeds--that is faster than the speed of sound. The air cannot move that fast and thus cannot "get out of the way" of the aircraft. When this happens, the air molecules are forced together and create a sort of gaseous wall called the sound barrier. As the aircraft breaks through this barrier, a loud, double thunderclap is heard. In the air cone created behind the speeding aircraft, air rushes in violently to refill the partial vacuum. These effects are the source of the double boom.

We have already had some experience with the sonic boom, but experts tell us that this does not really prepare us for what may be expected from the SST. An SST flying at 60,000 feet creates a boom-pressure pattern (or a shock-wave cone) which will reach 30 miles back of the plane and will measure 60 miles across. The effects on people who live in the area over which the giant plane is flying remain to be determined, but there is much apprehension that they may be extremely unpleasant and even dangerous.

There has been strong support for the development of an SST by the United States. In 1971, however, Congress rejected a program for this purpose sponsored by the Nixon administration. There were various reasons for the action by Congress, but the warnings of environmental disruption were certainly of great importance. It has even been suggested that our airports should be closed to SST's operated by other countries.

There is keen international competition in aerial transportation, and it is possible that proposals to have the United States construct an SST will be revived at some future date. It seems probable, however, that any such project will be vigorously opposed unless it can be shown that the environmental menace can be effectively controlled.

.....ECOLOGY. Oxford Book Company

TEACHER COMMENTS

TEACHER COMMENT NO. 1 : Participation Evaluation

The following checklist is offered as an example of a device which may be used to lend a degree of objectivity to evaluating student participation in class discussions. The teacher may involve students in the evaluative process by devising a rotation system whereby two or three students would evaluate class members during class discussion periods.

Only four simple catagories are employed in this checklist. More complex scaling may be included if the teacher wishes to discriminate among cognitive skills of the students,(i. e. recall, synthesis, analysis, etc.). However, this type of scale is not easily employed. The following catagories for evaluation are included in this suggested checklist:

1. Quantity of student contribution.
2. Content of student's remarks as these indicate knowledge of topic, critical and/or innovative thinking by student.
3. Relevance of student's remarks to subject under consideration.
4. Clarity of expression and presentation by student.

The evaluator may indicate quantity of student's remarks by simply placing a check in the appropriate column. The other categories should be rated on the following qualitative scale of 1-4.

1 - Poor (incorrect and/or inappropriate)
2 - Fair
3 - Good
4 - Excellent (complete and appropriate)

The following chart may be adapted for use in the evaluation described above. Simply record student's name when he initially participates and continue evaluation of any of his subsequent comments on same line. There is no need to record the student's name until the point of initial contribution.

NAME	QUANTITY	CONTENT	RELEVANCE	CLARITY
1. Sam Sunshine		3, 1, 2	4, 1, 3	3, 3, 3
2.				
3.				

TEACHER COMMENT NO. 2 : Chronology of Conservation Legislation (1965-69)

1965

Parks and Recreation. Authorization of additions of the Delaware Water Gap Recreation Area (72,000 acres in Pennsylvania and New Jersey); Spruce Knob Recreation Area (100,000 acres in West Virginia); Whiskeytown-Shasta-Trinity (225,000 acres in northern California); Assateague National Seashore (40,000 acres in Maryland and Virginia); and Ellis Island (27.5 acres to be added to the Statue of Liberty National Monument in New York).

Highway Beautification Act. PL 89-285 authorized a new program for beautifying the nation's Federal-aid highways through removal of junkyards and landscaping of areas adjacent to the highways.

1966

Parks and Recreation. Authorization of additions of the Indiana Dunes National Lakeshore (8,721 acres in Indiana, 35 miles from Chicago); Guadalupe Mountains National Park (77,582 acres in Texas); Cape Lookout National Seashore (30,000 acres in North Carolina); Bighorn Canyon Recreation Area (63,300 acres in Montana and Wyoming); Pictured Rocks National Lakeshore (67,000 acres in Michigan); and Wolf Trap Farm Park (96 acres 13 miles from Washington, D.C., in Virginia, the first Federal park to be devoted primarily to the performing arts).

1967

National Park Foundation. PL 90-209 established a foundation to accept donations of money, securities and real estate from the public to support the programs of the National Park Service.

Public Land Law. PL 90-213 extended the life and authorized additional funds for the Public Land Law Review Commission, which was created in 1964 to study Federal management and disposal statutes and regulations for the approximately 770.8 million acres of land owned by the Federal Government.

Wetlands Preservation. PL 90-205 extended for eight years the period during which Congress could make advance appropriations for acquisition of wetlands for migratory bird conservation.

1968

Conservation Fund. S 1401 provided new sources of revenue for the Land and Water Conservation Fund and enabled the Federal Government to hasten acquisition of land authorized for Federal recreation areas, thus avoiding a period of price speculation before the Government took over the land. The Fund established in 1964, had been plagued both by inadequate revenues and soaring land prices.

National Trails System. S 827 established a nationwide system of trails and authorized up to $5,500,000 for land acquisition.

Wild and Scenic Rivers System. S119 established a National Wild and Scenic Rivers System to preserve outstanding stretches of rivers from incompatible water resource development, pollution or commercialization.

Wilderness System. Five bills added more than 800,000 acres of Federally owned land to the National Wilderness Preservation System - the first additions since the system was authorized in 1964.

Parks and Recreation. Additions of the Redwood National Park (58,000 acres in northern California); North Cascades Park (505,000 acres in northern Washington); and Flaming Gorge Recreation Area (201,253 acres in Utah and Wyoming).

1969

Environmental Policy Act. PL 91-190 made environmental protection a matter of national policy and created a three man Council on Environmental Quality, with members appointed by the President.

Parks and Recreation. PL 91-88 added 6,640 acres of privately owned land to the Everglades National Park in Florida; PL 91-42 authorized funds to complete the acquisition of land for the Padre Islands

National Seashore in Texas; PL 91-60 established a national monument at the site of the Florrisant Fossil Beds (6,000 acres near Pike's Peak in Colorado).

Great Plains Conservation. PL 91-118 extended for 20 years the Great Plains Conservation Act of 1956, which authorized Federal contracts with farmers for retirement of land under programs to combat soil erosion in ten Plains states.

TEACHER COMMENT NO. 3 : Water Quality Control

Stricter regulations on oil spills anchored the Water Quality Improvement Act passed by Congress and signed by President Nixon in 1970 following a long deadlock between House and Senate versions of the bill.

Besides holding oil companies liable for up to $14 million to clean up oil spills, the legislation also prohibited the flushing of raw sewage from boat toilets; tightened restrictions on thermal pollution emanating from nuclear power plants and called for the determination of criteria concerning the effects of pesticides on the nation's waterways.

It also created an Office of Environmental Quality to serve as a staff for the President's Council on Environmental Quality.

The provisions of the Water Quality Improvement are as follows:

1. OIL POLLUTION

A. The discharge of oil into navigable waters of the United States or adjoining shorelines is contrary to U.S. policy.

B. The President is authorized to determine what quantities of oil, would constitute a threat to fish, shellfish, wildlife, beaches and public and private shorelines--thus violating the Federal Water Pollution Control Act.

C. Penalties will be assessed for failure of vessel operators or operators of onshore or offshore facilities to inform the appropriate U.S. agency of any oil spill. Fines range up to $10,000, imprisonment up to one year. Fines of up to $10,000 may also be levied for knowingly operating a vessel or facility which is discharging oil in violation of the Act.

D. The President is authorized to remove any oil spill not properly treated by the responsible party. (The Coast Guard is the preferred instrument for such clean-up.)

E. The vessel of facility responsible for the spill is liable to the U.S. Government for the costs of cleaning it up, up to $100 per gross ton of oil or $14 million total, whichever is lower, unless the spill was the result of an act of God, war, negligence by the U. S. Government, or an act of a third power. If the spill results from willful negligence or misconduct, liability is unlimited.

F. In the event of a marine disaster the government may, if necessary to abate a pollution hazard, remove or destroy any vessel which is creating the danger of discharging oil.

G. A National Contingency Plan for the removal of oil was established by the President, to be utilized in the event of imminent and substantial threat to the public health and welfare caused by an oil spill from an onshore or offshore facility. It established criteria for setting up regional contingency plans and set forth procedures and requirements for prevention of oil discharges, including a regulation that vessels carry the necessary material both to prevent and to clean up spills.

H. A revolving fund of $35 million was established in the U.S. Treasury to cover costs of emergency clean-up operations by the federal government.

2. OTHER HAZARDOUS POLLUTING SUBSTANCES.

The President is authorized to designate those discharges, other than oil, which constitute an immediate and serious health hazard, and establish criteria for their removal.

3. CONTROL OF SEWAGE FROM VESSELS.

Means were provided for establishing federal standards for marine sanitation devices to prevent the discharge of sewage into the navigable waters of the United States. The Coast Guard was directed to issue regulations concerning such devices. However, requirements were not to be construed so as to create an unreasonable demand upon small recreational craft. Time limits for compliance were two years for new vessels, five years for existing vessels.

4. AREA ACID AND MINE WATER POLLUTION.

The federal government has the authority to join in agreements with states or interstate agencies for the purpose of implementing demonstration projects concerning the elimination or control of acid or other mine water pollution from active or abandoned mines.

5. GREAT LAKES POLLUTION.

An authorization similar to the one concerning mine pollution was applied to the entry of the federal government into agreements with subordinate governmental agencies within the watershed of the Great Lakes.

6. ALASKA DEMONSTRATION PROJECTS.

The federal government is authorized to conduct demonstration projects providing central community facilities for safe water and to abate water pollution in Alaskan villages lacking such facilities.

7. FEDERAL GOVERNMENT COOPERATION.

All federal agencies and departments engaged in public works activities are required to meet water quality standards established in the Act. Both a federal license or permit and a state certificate showing compliance with water quality standards are necessary before any facility which might discharge substances into the nation's navigable waterways may be constructed. Licenses or permits are subject to revocation for violation of water quality standards.

8. OFFICE OF ENVIRONMENTAL QUALITY.

The function of this office is to assure that every federal department or agency involved with activities which affect the environment implement the provisions of the Water Quality Improvement Act.

9. TRAINING GRANTS AND SCHOLARSHIPS.

The Secretary of the Interior is authorized to issue grants or contracts to colleges and universities to assist in the development of educational programs in water quality control. In addition, scholarships may be awarded to undergraduate students entering occupations related to antipollution treatment works, or to students already accepted into antipollution programs.

There was a wide gap between the original House and Senate versions of the water pollution control bill, centering on the greater stringency of the Senate bill concerning the conditions and extent of liability for oil spills. Lobbies for the oil and gasoline industries reportedly exerted heavy influences against such liability measures. Months were spent in conference in an attempt to reconcile the two bills. A composite bill finally cleared committee, approaching the Senate version more closely than the House plan on liabilities. Senator Edmund Muskie (D-Maine), who had introduced the key provision on oil spills in the original Senate bill, attributed the eventual clearing of a strong bill to public reaction to the occurence of major oil spills off Nova Scotia, in Tampa Bay and off New Orleans. The Tampa Bay spill was believed to have awayed the committee's ranking Republican member, William C. Cramer (R.-Fla.), whose constituency was directly affected. Cramer had previously maintained a staunch opposition to the stiffer liability provisions of the Senate bill, helping to cause the lengthy stalemate.

TEACHER COMMENT NO. 4 : Small Group • Self-Evaluation

Instructions: Students are to list members of their group (with the exception of themselves) in the order of how valuable each was in accomplishing the group's goals. The ranking of members is collected and each group member's total score is determined by adding up the number he was ranked by each of his fellow group members. Each student's group rank is determined by listing them from the lowest total score to the highest total score. The member with the lowest total score is considered to be the most valuable.

Sample Form for Students
SMALL GROUP SELF-EVALUATION

Instructions: List group members in the order of how valuable each was in accomplishing the group's goals. Do not list your own name. For example if your group has six members, list five names in the order of their importance to your group's success. By each name indicate the grade you think each member deserves and make any comments about their work that you wish. This individual evaluation will remain confidential.

Rank Order of Members of the Group. (Names)	Letter Grade They Deserve	Comments
1.		
2.		
3.		
4.		
5.		

TEACHER COMMENT NO. 5 : Small Group • Flow of Contributions

Date ____________________

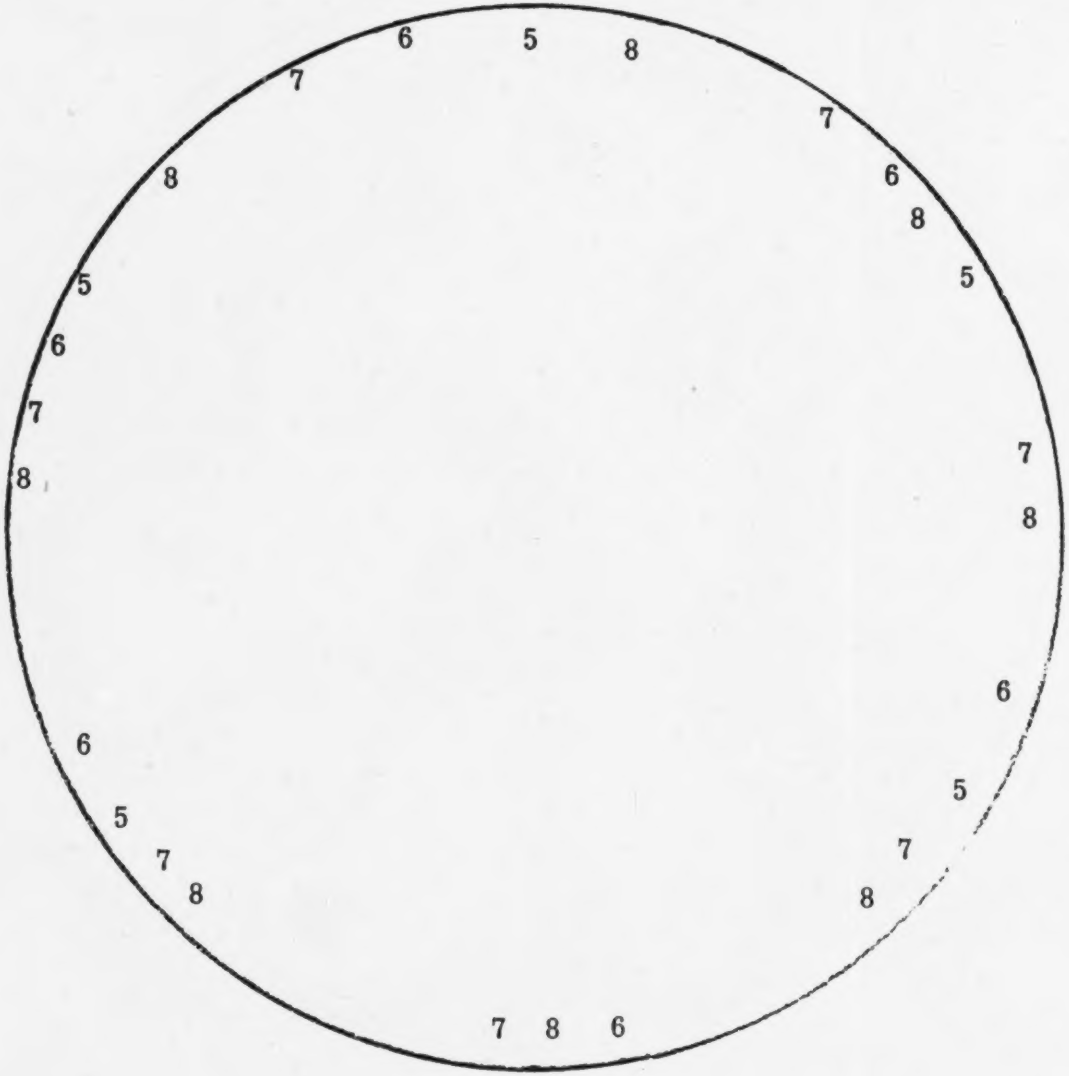
Time __________ to __________

Problem ____________________

Instructions:

Circle each number that corresponds to the number of participants in the group and write the name of each member on one of the numbers. Draw a straight line from the first person who makes a contribution to each succeeding contributor as long as the discussion proceeds.

Evaluator ____________________



TEACHER COMMENT NO. 6 : Small Group • Pattern of Contributions

Date ____________________

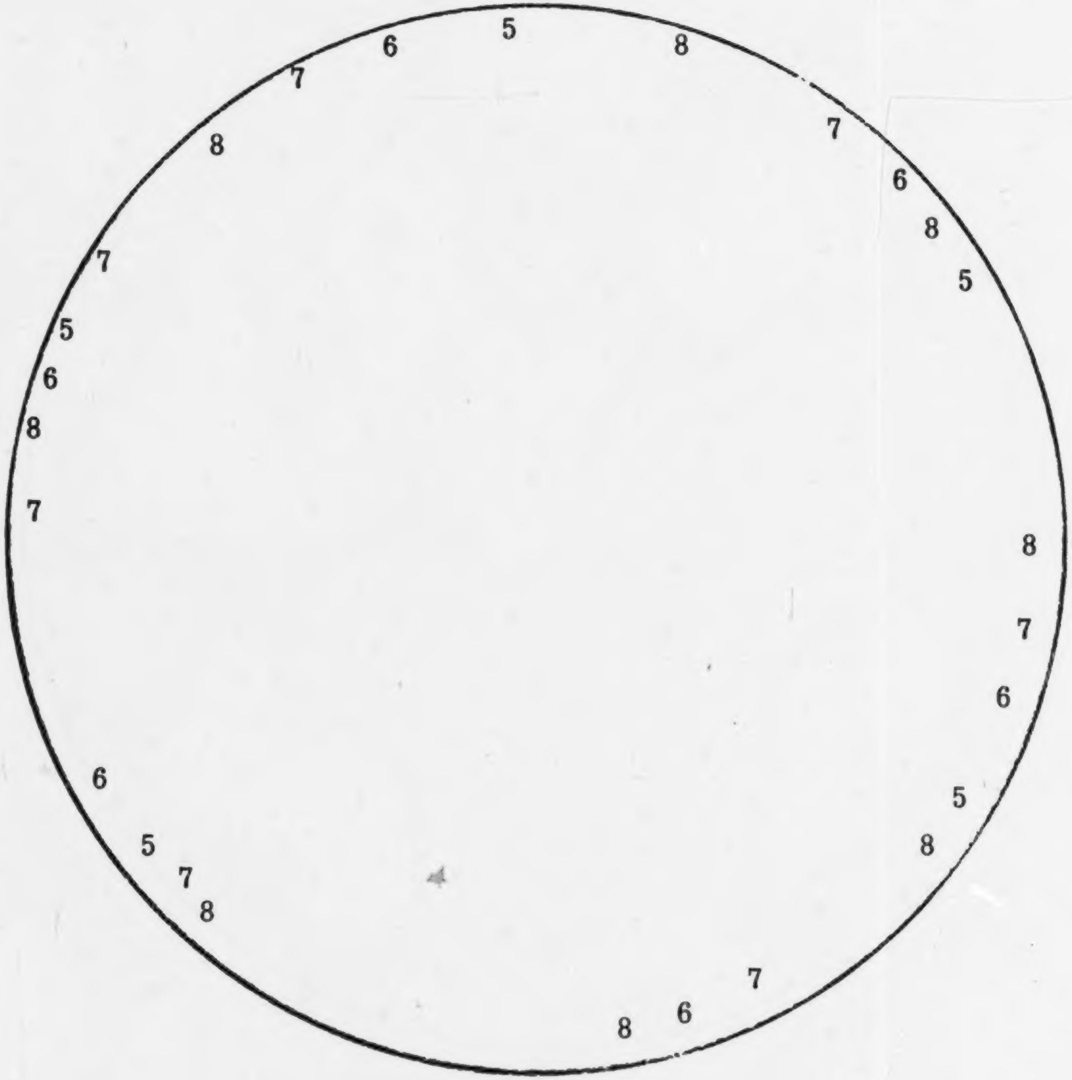
Time ________ to ___________

Problem _________________

Instructions:

Circle each number that corresponds to the number of participants in the group and write the name of each member on one of the numbers. Draw an arrow (length of arrow in proportion to length of contribution) from the contributor toward the person to whom the contribution is directed. If the contribution is directed toward the entire group, direct the arrow toward the center of the circle.

Evaluator _________________



TEACHER COMMENT NO. 7 : Small Group • Individual Evaluation

Date__________ Time_______ to_______ Problem__________ Participation__________

Excellent Poor		Item
1 2 3 4 5	1.	Was well prepared for discussion
1 2 3 4 5	2.	Used prepared outline properly
1 2 3 4 5	3.	Kept running outline of discussion
1 2 3 4 5	4.	Contributed readily at every opportunity
1 2 3 4 5	5.	Contributions were presented at the proper time
1 2 3 4 5	6.	Contributions were brief
1 2 3 4 5	7.	Contributions were clearly stated
1 2 3 4 5	8.	Showed evidence of a firm grasp of discussion theory
1 2 3 4 5	9.	Used constructive reasoning rather than intentional reasoning
1 2 3 4 5	10.	Demonstrated objectivity
1 2 3 4 5	11.	Reasoned critically
1 2 3 4 5	12.	Showed open-mindedness
1 2 3 4 5	13.	Provided sources of facts and other bases for opinion readily
1 2 3 4 5	14.	Answered questions asked of him readily
1 2 3 4 5	15.	Listened well to contributions of others
1 2 3 4 5	16.	Demonstrated an attitude of cooperation rather than competition
1 2 3 4 5	17.	Talked clearly, distinctly and audibly
1 2 3 4 5	18.	Courteous and respectful of others (didn't interrupt, etc.)
1 2 3 4 5	19.	Encouraged others to contribute to the discussion
1 2 3 4 5	20.	Assisted in providing leadership services
		Total Evaluation
1 2 3 4 5		Rating of total performance in relation to other members of the group
		Group Evaluation
1 2 3 4 5		Rating of the whole group in relation to other group discussions witnessed.

Instructions: Circle the number for each item that tends to represent your opinion about the quality of participation demonstrated.

Evaluator________________

TEACHER COMMENT NO. 8 : Evaluation of Listening Skills

Group Reporting__________________

I. ATTENTION GIVEN REPORTERS (check one)

__________ Excellent (5 points) __________ Good (4 points) __________ Fair (3 points)

__________ Poor (1 point)

Possible Points ____5____ Your Points __________

II. VALUABLE QUESTIONS ASKED OF REPORTERS (check one)

__________ Many (5 points) __________ Some (4 points) __________ Few (2 points)

__________ None (0 points)

Possible Points ____5____ Your Points __________

III. ADDED INFORMATION GIVEN AND/OR FACTS RETAINED BY LISTENERS (check one)

__________ Much or many (5 points) __________ Some (4 points) __________ Few (2 points)

__________ None (0 points)

Possible Points ____5____ Your Points __________

Evaluation of (Student's Name)________________________________ Total ______________

TEACHER COMMENT NO. 9 : Evaluation Form For Oral Report
(To be filled in by students and/or teacher)

Subject of Report____________________ Student reporting______________________________

I. Knowledge of subject matter and/or what way questions were answered.

_____a. Excellent (5 points)
_____b. Good (4 points)
_____c. Fair (3 points)
_____d. Poor (1 point)
Points Earned_______________

II. Presentation of material by using audio/visual aids. Evaluate each aid used from 0--5 points.

_____a. Charts
_____b. Maps
_____c. Graphs
_____d. Guest Speaker
_____e. Slides
_____f. Films
_____g. Filmstrips
_____h. Table Display
_____i. Study Guides
_____j. Puzzles/Games
_____k. Skits
_____l. Other
Points Earned_______________

III. Equipment used in presentation. Evaluate each aid used from 0--5 points.

_____a. Opaque Projector
_____b. Filmstrip Projector
_____c. Overhead Projector
_____d. Film Projector
_____e. Globe
_____f. Chalkboard
Points Earned_______________

IV. Speaker's attitude towards listeners, tone, and quality of voice should be considered. Evaluate as #1.

_____a. Excellent
_____b. Good
_____c. Fair
_____d. Poor
Points Earned_______________

V. Evaluation of the participation of the members of the groups. (Use where applicable)

_____a. Excellent
_____b. Good
_____c. Fair
_____d. Poor
Points Earned_______________
Total Points_______________

TEACHER COMMENT NO. 10 : Brainstorming

Brainstorming is a creative process of suggesting possible solutions to problems without justifying the solutions. It could be called "ideation."

Brainstorming is creative thinking as opposed to critical thinking. Critical thinking comes later.

Brainstorming has its value in the potentiality of a group to turn up a large number of ideas in a very short time. "One idea deserves another!"

The rules are very simple:

a. Critical judgment, justification, and evaluation is forbidden.
b. Contributions are uninhibited.
c. Quantity, brevity wanted. Be practicable and specific.
d. Improvements (hitch-hike) on other ideas desirable.
e. Think freely; speak up!

Topic: How can we reduce highway accidents?

Possible Contributions:

1. Increase Highway Patrol
2. Raise minimum age of drivers.
3. Prison sentence for drinking drivers.
4. Others

TEACHER COMMENT NO. 11 : Government Sanctions and The Environment

There are several types of sanctions which the government may employ against polluters.

The first is criminal prosecution. This avenue, however, has rarely been followed effectively in the enforcement of environmental protection laws, for several reasons. First, a criminal conviction involving a prison term or large fine is likely to require the prosecution to prove before a jury willfull intent, or at least negligence, on the part of the polluter -- beyond a reasonable doubt. Secondly, it would be extremely difficult to assay individual culpability within a corporate structure; and corporations may only be fined, not emprisoned. Furthermore, in criminal proceedings the defendants enjoy the protection of the fifth amendment against self-incrimination, thus requiring the government to furnish incontrovertible evidence without benefit of discovering vital information known only to the defendants. If lost, a criminal case may not be appealed. Finally, the establishment of appropriate punitive measures is difficult. If penalties are too harsh, they would lose public support. This would make it very difficult to secure a conviction in a jury trial, and might deter judges from imposing the penalties. On the other hand, penalties which are too lenient would not constitute an effective deterrent to pollution; it is much more economical for large corporations to absorb minor fines than to install expensive pollution control equipment.

An effective alternative to criminal prosecution is the imposition of monetary penalties through civil action. If large enough, such penalties may be effective deterrents even to large corporations, especially if imposed through direct administrative action. They may also be cumulative, assuring long-term remediation. Moreover, since civil action does not require trial by jury and proof beyond a reasonable doubt, it is much more likely to achieve abatement.

The most effective and most widely used administrative remedy against a business firm which violates the law is the injunction. Applied to environmental cases, it may be granted merely upon presentation of a preponderance of the evidence, without stipulating that the violation be willful or even performed knowingly. Although an injunction can usually be appealed by the polluter, a temporary restraining order or preliminary injunction may often be granted pending further legal action. At present, two factors limit the effectiveness of injunctions in environmental control. Courts are usually hesitant to grant immediate relief in situations of chronic abuse, such as the continuous pollution of a river by an industrial plant, for fear of severe economic repercussions such as unemployment. (Immediate injunctions are most likely to be granted in the case of anticipated environmental damages, such as the desecration of a natural area, which would be irrevocable.) Secondly, lengthly delays in litigation -- in one case five years -- are possible, encouraging "stalling" tactics on the part of polluters. However, if procedures could be expedited, injunction remains an effective means of environmental control.

A fourth enforcement device open to the government is to initiate a civil action for damages. One problem intrinsic to this channel is the difficulty of gauging damages suffered by the government itself. Alternatively, the government may seek to recover damages for a private person, providing he has not already filed suit. Precedent for such action exists in the awarding of treble damages to individuals proven by the government to have been victimized by prices which violated the Emergency Price Control Act of 1942. Proof of damage is the chief limiting factor on sanctions which award damages; while it is easy to figure the amount of an illegal price increase and triple it, how do you measure the exact damages inflicted by air pollution and then triple them? Simple civil penalties contain the advantage of not requiring quantitative proof, merely a demonstration of the occurrence of prohibited acts, or failure to perform prescribed acts.

A particularly stringent instrument of enforcement is the licensing of all businesses by the government, with licenses to be forfeited upon violation after a warning. While such a practice would undoubtedly serve as a strong deterrent to pollution, it could also become onerous, in that the shut-down of installations such as a large power plant or a major industrial plant could create social and economic problems that outweigh any ecological gains. Nevertheless, a licensing device may gain support if the environmental crisis deepens.

Another option open to the government is to seize control of a polluting plant and operate it in such a manner as to comply with environmental laws. Just as it has occasionally acted in the public interest by compelling the continuation of essential production in spite of a strike, the government could intervene in a flagrant instance of pollution, occupy the plant long enough to implement corrective measures, and then return the plant to its management, with compensation to be determined via the Court of Claims. This method would probably lessen the problem of lost jobs, with the government retaining employees and maintaining production as much as possible during the interim.

A more drastic form of seizure would be out-and-out forfeiture of the plant to the government, without compensation. This action is based on the anthropomorphic concept that the environmental offense resides in the plant itself, making the property subject to seizure in a manner analagous to governmental confiscation of boats employed in smuggling or distilleries which violate alcohol tax laws. It allows the government to compensate for economic problems deriving from the installation of control equipment, but the government may at the same time inherit a considerable burden in management.

In addition to choosing which sanction is to be utilized, considerable importance lies with the stage at which governmental enforcement is to be applied. Ideally, enforcement procedures should be designed to allow the potential polluter a wide range of options on how to avoid the environmental damage in a way which is most suitable to his own economic situation. However, practical considerations usually limit regulatory action to a specific point of application where enforcement is most feasible and least costly. For example, it is much more efficacious to forbid the manufacture of detergents containing phosphates rather than to prohibit their use. The reduction of sulfur dioxide in the atmosphere of large cities is very difficult to achieve through regulation of gaseous emissions, but it has been realized through the restriction of sulfur levels in liquid and solid fuels, which is a more viable enforcement instrument because it can be monitored systematically. Control of non-biodegradable containers could most effectively be attained by imposing controls at their source, or by forbidding interstate shipment of such items, as opposed to an enforcement program aimed primarily at the consumer, which would be unmanageable. The imposition of industry-wide controls would prevent corporations from exploiting such measures to achieve a competitive advantage, placing all on an equal basis. Other problems could be attacked from several points simultaneously. In the case of air pollution from automobile exhaust, for example, government could concomitantly impose emission control regulations on the manufacture of all new cars, restrict fuel additives, forbid the manufacture or shipment of certain kinds of engines, and establish general emission standards for all existing vehicles.

Most of the measures described above are intended to curtail the pollution process at some point prior to the actual emission of pollutants, preferably at a juncture where enforcement is most practical. However, in many cases the only clearly discernible point of arrest is the emission stage, where specific environmental consequences may be extremely difficult to ascertain. Therefore, although it is wise for the government to seek alternate points of application wherever possible, it is inevitable in many cases that the only effective mode of enforcement will be to impose controls on actual emissions.

As an alternative to the sanctions outlined above, the government may exercise other, more subtle methods of control, such as subsidies, incentives, charges and government purchasing power.

TEACHER COMMENT NO. 12 : Role of the Environmental Protection Agency in Air Pollution

As it presently stands, federal law provides for federal abatement procedures against polluters in four spearate situations, administered in each case through the Administrator of the Environmental Protection Agency. However, federal intervention has been very judicious, limited to cases of great magnitude or urgency and leaving the enforcement of most pollution control measures to state and local governments.

The first situation is an instance of intrastate air pollution where the governor of the state requests intervention by the Administration of the EPA. Even so, he may proceed only if he determines the effect of the pollution to be of sufficient significance to justify the exercise of federal jurisdiction. A second procedure, added in the Air Quality Standards Act of 1967, authorizes the Administrator to take immediate legal action to stop pollution which creates an "imminent and substantial endangerment to the health of persons,"* if state and local authorities have failed to act. This provision is intended only for situations of extraordinary severity, such as killer smogs caused by air inversions. The third possibility for federal intervention applies to the enforcement of air quality standards within air quality control regions designated by the EPA. If the failure of one state to enforce controls causes air pollution to affect other states within the region, they may request (though not require) the EPA Administrator to intervene. He does so only if he finds that the state involved has failed to take reasonable action against the polluter. In existence for five years, this procedure has never been invoked, by either the Secretary of the Department of Health, Education and Welfare, or the Administrator of the EPA. The fourth situation is the only case where a state may require the federal government to intervene. As provided in Section 105 of the Clean Air Act of 1963, if the source of pollution is in one state and the adverse effect in another, the governor or state air pollution control agency of one of the states involved (or, with state approval, a municipality) may require the Administrator of the EPA to call a conference, provided there is evidence of air pollution "which is alleged to endanger the health or welfare of persons in a state other than that in which the discharge originates." ** The Administrator may take the initiative of summoning state officials to subsequent consultations.

Federal intervention in the enforcement of air pollution controls is thus seen to be limited to cases of unusual gravity. In all but one instance, initiative for such intervention rests with the federal agency, not the states. And although there is one situation where states may compel the Administrator of the EPA to intervene, an individual citizen cannot require him to act, under any federal enforcement procedure.

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* Frank P. Grad, George W. Rathjens and Albert J. Rosenthal, Environmental Control: Priorities, Policies and the Law (New York:1971), P. 103

** Ibid. p. 105.

TEACHER COMMENT NO. 13 :State and Municipal Governemtn Control of Water Pollution

Most water pollution control, with the exception of local sewage regulation, is lodged at either a state level, through a central agency, or on different regional water basin levels within the state, with separate agencies. The modus operandi for enforcement may consist of an active pursuit of violators by means of inspections or a monitoring system, or it may be limited to responding to complaints. Most states have laws which call for a hearing as soon as a violation is discovered, to give the alleged violators an opportunity to answer the charges being brought against them. In emergency situations, some states authorize the control agency to issue an order prior to a hearing; in such instances the hearing must be conducted as soon thereafter as possible. The customary remedy following a hearing is an order to cease and desist, at the discretion of the agency commissioner. A violator who fails to comply with such an order is usually liable to both civil and criminal sanctions.

Civil penalties for failure to meet water quality standards may be recovered separately through civil action. The range of such penalties is wide from state to state, just as it is with air pollution violations. Some states levy fines to a maximum of only one or two hundred dollars; others range as high as $3,000. In Florida, the civil penalty is $1,000 for each offense, and the criminal penalty for a misdemeanor consists of a $1,000 fine and a year in prison for each offense. New York has a criminal penalty which includes fines ranging from $500 to $2,500 and imprisonment of up to a year for each offense. Some states consider each day of violation to be a separate offense. Most states have statutes which provide relief through injunction in cases where the violator fails to comply with previous agency orders. All state laws provide for judicial appeal and for review of agency orders. In most cases, such a review is based on records from the previous hearing before the agency, although in some instances the courts are directed to conduct a fresh review of the situation.

The main responsibility of municipalities in controlling water pollution is to maintain the purity of the water supply by enforcing proper sewage disposal procedures. It is generally up to the municipalities, under the appropriate health code regulations or subdivision ordinances, to see that necessary septic tanks and private sewage disposal systems are constructed, and in such a way as to prevent the pollution of well water and other water supply sources. Non-compliance usually constitutes a misdemeanor. In most cases, a person who wishes to install a private disposal system must obtain a permit from the local health agency. The permit often specifies that the system not be buried until a sanitary inspector has examined it. Most municipalities also hold the responsibility for policing malfunctioning sewage disposal systems, and they generally have the authority to intervene summarily in situations where the malfunction has created a public nuisance. Some municipalities render it compulsory for homeowners to hook up with public sewers as soon as they become available, assuming assessed expenses themselves. Local laws may also compel developers of subdivisions to furnish community sewage treatment facilities for the development as a whole.

TEACHER COMMENT NO. 14: Roleplaying Procedures

1. Advise students that they will now participate in a mock session of the Senate in which they will each be debating and deciding upon an issue arising from the following hypothetical situation:

> Senator Sava Dime, representing a conserative, agricultural district, has introduced a bill to eliminate the EPA, which was created by Congressional approval of President Nixon's Reorganization Plan Number 3 and has been in existence since December 2, 1970. Senator Dime contends that the functions of the EPA are repetitive of those carried out by other Federal departments and agencies. His argument rests fundamentally on his belief that the EPA is a part of the unnecessary additions which have been made to the cumbersome Federal bureaucracy in recent years. He says that elimination of this agency would result in financial savings and no substantial reduction in enforcement of environmental laws. The Senate Committee on Government Operations has returned an unfavorable report to the Senate on Senator Dime's bill; however, Senator Dime is planning a strong floor fight for his proposal.

2. Divide class into 6 small groups, assigning 3 groups the responsibility of defending Senator Dime's bill and 3 groups the responsibility of defending the EPA against opposition. Each group is to fully research the organization, functions, powers, enforcement techniques, etc. of EPA and should consider the following type of questions in preparing for eventual debate: Why was the EPA created? What are the responsibilities of the EPA? Could these responsibilities be assumed by other (already existing) governmental agencies? Could other agencies or departments meet these responsibilities as well as the EPA? Why or Why not? What are the budgetary requirements of EPA? How are such funds expended?

3. Upon completion of research, have students organize a mock session of the Senate by electing a

President Pro Tempore and Secretary of the Senate. (Students should select class members to serve as Vice-President, Senator Dime, and Chairman of Government Operation Board.) Instruct students on rules for debate on Senate floor and advise class that each class member will be responsible for participating in debate. Vice-President will preside over debate which should continue until both sides have exhausted argument and have voted to close debate and vote on bill under consideration. Roll-call vote should follow.

TEACHER COMMENT NO. 15

Water Pollution Control Funds For Fiscal 1968-70

(In millions of dollars)

States	1968		1969		1970	
	Authorized	Allocated	Authorized	Allocated	Authorized	Allocated
Total	$450.0	$203.0	$700.0	$214.0	$1,000.0	$800.0
ALABAMA	8.4	4.1	12.9	4.1	18.3	14.7
ALASKA	1.2	.9	1.5	.9	1.9	1.6
ARIZONA	3.8	2.0	5.6	2.1	7.8	6.3
ARKANSAS	5.2	2.9	7.6	2.8	10.6	8.6
CALIFORNIA	35.3	14.6	56.9	14.9	82.8	65.6
COLORADO	4.7	2.4	7.1	2.4	10.0	8.1
CONNECTICUT	6.2	2.9	9.7	2.9	13.9	11.1
DELAWARE	1.6	1.1	2.3	1.1	3.0	2.5
DISTRICT OF COLUMBIA	2.3	1.3	3.3	1.3	4.6	3.8
FLORIDA	11.8	5.3	18.6	5.4	26.8	21.4
GEORGIA	9.8	4.6	15.1	4.6	21.6	17.3
HAWAII	2.2	1.4	3.0	1.3	4.1	3.4
IDAHO	2.5	.5*	3.4	1.6	4.5	3.7
ILLINOIS	22.9	9.6	36.7	9.8	53.4	42.3
INDIANA	11.1	4.9	17.5	5.0	25.2	20.0
IOWA	6.9	3.3	10.7	3.3	15.3	12.2
KANSAS	5.7	2.8	8.6	2.8	12.2	9.8
KENTUCKY	7.8	3.7	12.0	3.8	17.0	13.6
LOUISIANA	8.3	4.0	12.7	4.0	18.1	14.5
MAINE	3.1	1.9	4.5	1.9	6.1	5.0
MARYLAND	7.5	3.5	11.8	3.6	17.0	13.6
MASSACHUSETTS	12.0	5.3	19.1	5.4	27.6	22.0
MICHIGAN	18.0	7.7	28.7	7.8	41.6	33.0
MINNESOTA	8.4	3.9	13.1	3.9	18.7	14.9
MISSISSIPPI	6.2	3.4	9.2	3.4	12.8	10.4
MISSOURI	10.3	4.7	16.3	4.8	23.4	18.7
MONTANA	2.4	.7*	3.3	1.5	4.5	3.7
NEBRASKA	4.0	2.2	5.9	2.1	8.2	6.7
NEVADA	1.2	.9	1.7	.9	2.2	1.9
NEW HAMPSHIRE	2.2	1.4	3.0	1.4	4.0	3.4
NEW JERSEY	14.0	6.1	22.4	6.2	32.4	25.7
NEW MEXICO	3.1	.7*	4.4	1.9	6.0	5.0
NEW YORK	37.6	15.5	60.7	15.8	88.4	69.9
NORTH CAROLINA	11.1	5.2	17.4	5.2	24.9	19.9
NORTH DAKOTA	2.3	.3*	3.3	1.6	4.3	3.6
OHIO	22.1	9.4	35.5	9.6	51.5	40.9
OKLAHOMA	6.1	3.1	9.3	3.1	13.2	10.6
OREGON	4.7	2.4	7.1	2.4	10.1	8.1
PENNSYLVANIA	25.7	10.8	41.3	11.0	60.0	47.5
RHODE ISLAND	2.7	1.6	3.9	1.6	5.3	4.3
SOUTH CAROLINA	6.5	3.4	9.7	3.4	13.7	11.0
SOUTH DAKOTA	2.5	.3*	3.5	1.7	4.6	3.8
TENNESSEE	9.0	4.3	13.9	4.3	19.8	15.8
TEXAS	22.0	9.4	35.2	9.6	51.0	40.5
UTAH	2.9	.7*	4.1	1.8	5.6	4.7
VERMONT	1.8	1.4	2.4	1.3	3.0	2.5
VIRGINIA	9.7	4.5	15.1	4.5	21.7	17.3
WASHINGTON	7.0	3.3	11.0	3.3	15.7	12.5
WEST VIRGINIA	5.2	2.7	7.8	2.8	10.8	8.8
WISCONSIN	9.5	4.4	15.0	4.4	21.5	17.1
WYOMING	1.5	.005*	2.1	1.2	2.6	2.2
GUAM	1.6	.8*	1.6	1.5	1.7	1.7
PUERTO RICO	6.6	3.5	9.8	3.5	13.7	11.1
VIRGIN ISLANDS	1.5	1.5	1.5	1.4	1.6	1.5

* *Actual amounts used by these eight states although they were entitled to use more. Unused amount totaling $8.3 million from these eight reallocated to other states.*

SOURCE: Federal Water Pollution Control Administration

TEACHER COMMENT NO. 16 : Evaluation Form for Visuals

There are four major areas of importance indicated on this form. Teachers who grade on a percentage basis should insert a value in each blank to determine the weight of each area in relation to the others, making the sum of all blanks on a perfect item total 100. Teachers using other systems (such as variable points) should determine the proper value of each area. Note: part 4 clarity, has four sub-areas which combine to make the total value for part 4. This form is intended as a suggested guide for teachers and/or students to evaluate visual presentations produced by students.

Student's Name ______________________ Title or Topic ______________________

VALUE AREA OF EVALUATION

1. APPROPRIATENESS
If the student has had an opportunity to select either the topic or method of his presentation,
______ is the choice of either or both appropriate to the assignment?

2. ACCURACY
______ Are the facts used in the presentation accurate? If not, where is the inaccuracy?

3. COMPLETENESS
Does the presentation represent a complete statement or coverage of the subject (Is there material or facts omitted which makes the presentation misleading) ? If not, where is the pre-
______ sentation lacking?

4. CLARITY
Is the presentation clear to the viewer?
- ______a. Is the viewer readily able to determine the point or message contained in the presentation?
- ______b. Is the presentation free from unnecessary distractions? (pictures, drawings, etc. which do not contribute to the purpose?
- ______c. Are the colors and sizes of lines, bars, and/or pictures suitable?
- ______ ______d. In the case of a collage or drawing, is the focal point clearly determined?

______ COMMENTS: ______________________________
(Total Score)

TEACHER COMMENT NO. 17 : Disjunctiveness of Federal Agencies Which Leads to Pollution

One factor which complicates the implementation of environmental protection legislation is the lack of integration of policy between developmental programs and pollution control programs within the federal government. In many cases, different agencies within the government, or even different functional components of the same agency, may be engaged in pursuits which are entirely antithetical.

One example of such disjunctiveness is the extensive involvement of the federal government in highway development. While federal funds are pouring into high-priority road development projects such as the sprawling interstate highway network presently under construction, these very same roads are causing or exacerbating environmental problems which other agencies of the government are committed to combat. Aside from possible damage to scenic, historic and aesthetic values, the construction of highways may have substantial ecological consequences such as interference with watershed management or adverse effects upon forests, wildlife and natural resources. Highway development also intensifies the problem of air pollution, because it clearly encourages the production of more automobiles and trucks which will use the new roads. Not only does this stand to increase exhaust emissions, but also to contribute to air and water pollution resulting from the manufacture of the automobiles themselves and the additional refining of petroleum necessary to fuel these new vehicles. In short, continued highway development may undermine federal efforts to control automobile pollution. The only viable solution may be to shift priorities from massive highway construction to the development of more extensive and efficient mass transit systems.

Another example of a federally-supported program which poses a threat to the environment is the development of atomic energy. The Atomic Energy Commission is directed to encourage and aid in the development of nuclear power sources. These facilities, in turn, pose three specific dangers to the environment. First, there is the matter of disposal of nuclear wastes. Secondly, there is the danger of cumulative effects of low-level radioactive emissions which do not, at any one point in time, exceed safety levels. Probably most significant, however, is the problem of thermal pollution which results from the use of river water as a coolant for the reactors. Although this situation is also created by conventional power plants, nuclear processes generate much more heat than conventional methods. It should be pointed out, however, that rapidly growing power needs make it unrealistic to insist on total environmental protection. The most workable objective would be to minimize environmental consequences while meeting power demands. This could best be realized through better integration in the policy-making process between government agencies which sponsor new projects and those charged with the protection of the environment.

There are other examples of government agencies which are working in near diametric opposition. Juxtapose, the land reclamation projects of the Army Corps of Engineers and the attempt of the Department of the Interior to preserve wetlands. Or compare the promotion of agricultural insecticides and fertilizers by the Department of Agriculture with the Department of Interior's efforts to control water pollution. The "schizophrenic" nature of government actions may even be observed within the same department. One responsibility of the Department of Interior, for instance, is to improve the exploitation of natural resources, partially through mining projects. Many such mining operations lead to despoilage of land and alteration of the topography in a manner which helps pollute the rivers the Department of the Interior is supposed to be cleaning up! It would seem advisable for one governmental hand to let the other one in on what it is doing. A significant step was taken in this direction with the establishment of the Environmental Protection Agency, which has assumed and coordinated environmental functions which had previously been scattered through several other departments. This should help to assure the development of government programs which reveal better integration between progress and environmental protection.

TEACHER COMMENT NO. 18

U.S. Agency Backs Plan to Permit River Pollution

HOLLYWOOD (AP) — Despite strong opposition from Georgia and Florida, the U.S. Environmental Protection Agency has quietly endorsed a proposal that would **allow the International Telephone and Telegraph** Co. to continue polluting the Amelia River for three years.

The Florida Pollution Control Board had ordered the company to clean up discharges from its ITT Rayonier plant at Fernandina Beach by Jan. 1, 1973. Under the plan approved by EPA, there would be no pollution abatement until 1975.

Even after 1975, an outfall into the Amelia River would be permitted to discharge 5 percent of the current outfall volume.

Jack E. Ravan, EPA's southern regional administrator, has told Florida officials the ITT plan eventually would meet water quality standards. The officials say the 95 percent reduction in the daily outflow of 30 million gallons of acid wastes is impressive but inadequate.

"EPA is trying to convince us that the reduced amount of waste will not harm the Amelia River, and we just don't agree," said Jose F. deCastro, chief of the state's Bureau of Enforcement.

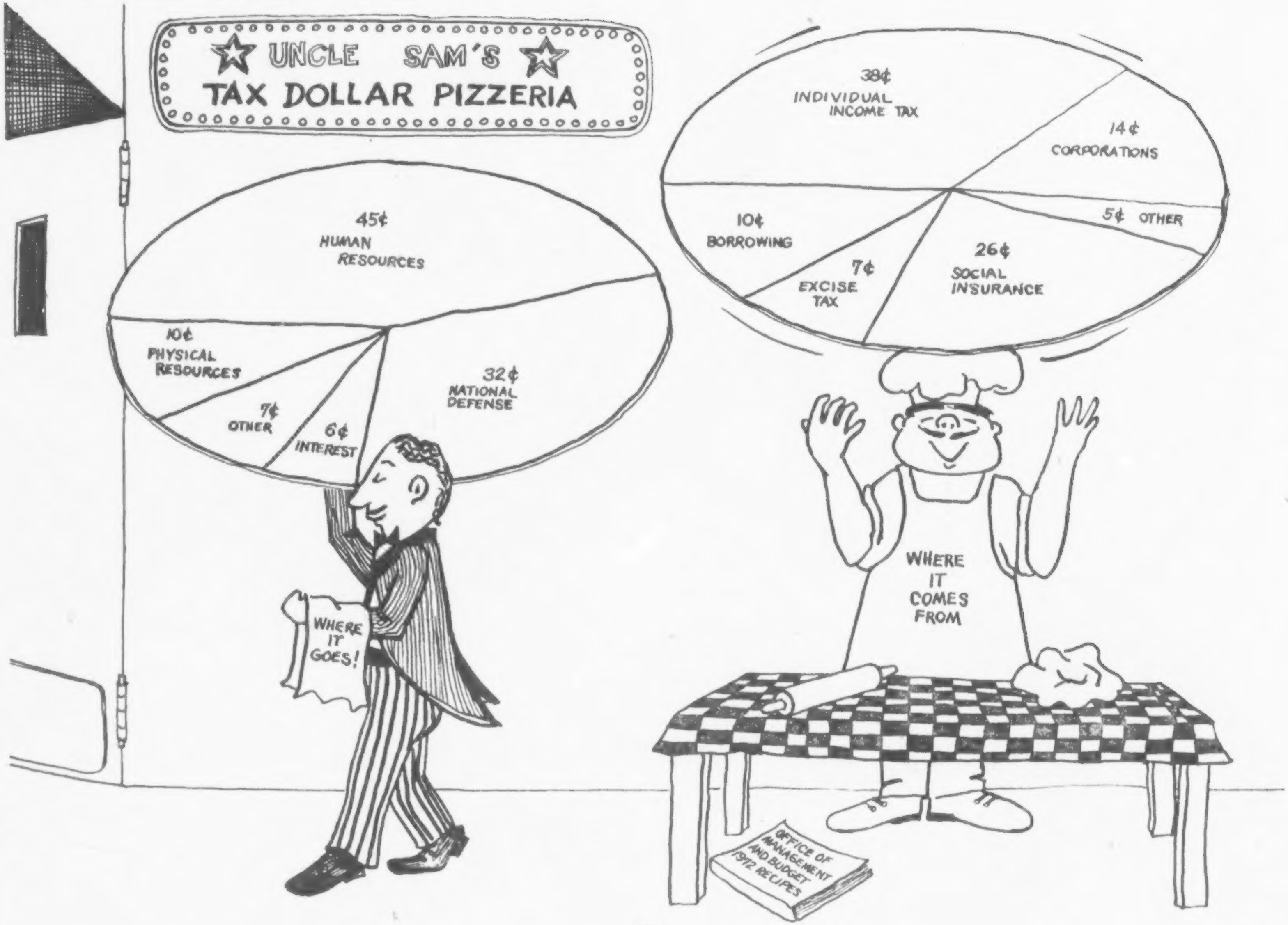
A group of conservationists met last Feb. 16 with Ravan and other EPA officials. They expressed concern with the continued failure of ITT to come up with an effective pollution abatement program.

In a confidential update on the ITT plans, the EPA officials said the company had evolved an effective plan and indicated that it involved recycling of the wastes. ITT had previously claimed that recycling was impossible for a sulphite mill.

"It will not involve any ocean outfall," said a memo later circulated to conservationists "although an outfall depicted as being only 5 percent of the current outfall volume would be allowed into the Amelia River.

"Air emissions would also be permitted but are depicted as being well within the federal and state air quality control boundaries. It should be noted that Florida standards are notably lax, as was pointed out by Mr. Ravan

TEACHER COMMENT NO. 19


UNCLE SAM'S
TAX DOLLAR PIZZERIA
45¢ HUMAN RESOURCES
10¢ PHYSICAL RESOURCES
7¢ OTHER
6¢ INTEREST
32¢ NATIONAL DEFENSE
WHERE IT GOES!
38¢ INDIVIDUAL INCOME TAX
14¢ CORPORATIONS
5¢ OTHER
26¢ SOCIAL INSURANCE
7¢ EXCISE TAX
10¢ BORROWING
WHERE IT COMES FROM
OFFICE OF MANAGEMENT AND BUDGET 1972 RECIPES

TEACHER COMMENT NO. 20 : Environmental Regulation • Intergovernmental Cooperation

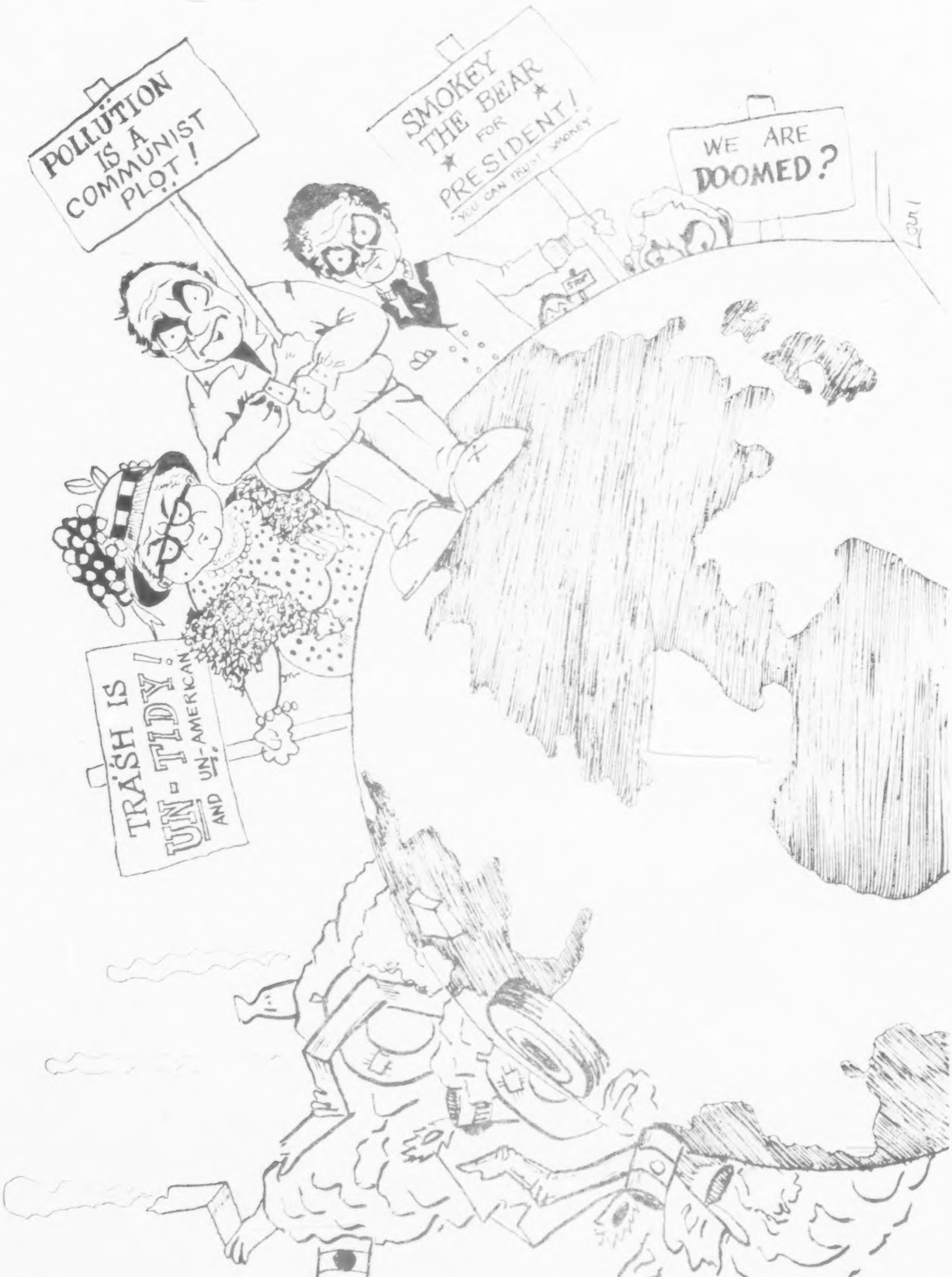
There has not yet been substantial intergovernmental cooperation in the area of environmental regulation and enforcement. Most cooperative ventures which have been undertaken have been imposed from a federal level, rather than through the mutual initiative of equal-level state or local governments.

There are three major examples of intergovernmental cooperation in environmental regulation, all originiating at a federal level. The 1967 Air Quality Standards Act and the 1966 Water Restoration Act are, in a sense, examples of intergovernmental cooperation, since the federal government sets requirements and asks the states to comply. The federal government reserves the power to impose standards in the event of non-compliance. A second example of intergovernmental cooperation is the use of federal grant-in-aid funds in the construction and maintenance of local sewage treatment plants and water purification installations. The third instance of governmental teamwork lies in the field of atomic energy, where states and localities have assumed certain aspects of radiation safety control, under special contracts with federal authorities. In all three instances, however, the cooperation is either enforced by the federal government, or conducted under terms established by the federal government.

The only historically proven device for intergovernmental cooperation is the interstate compact. Derived from a colonial device used to settle boundary disputes, the interstate compact has been found by the Supreme Court to rest upon a sound constitutional provision. Interstate compacts for environmental regulation have already been established, but they differ widely in their degree of responsibilities and power. The first such compact was the Interstate Sanitation Compact (known as the Tri-State Compact), formed in 1935 by New York, New Jersey and Connecticut. Its initial purpose was limited to the protection of fish and shellfish against sewage and other effluents in the coastal, estuarial and tidal waters around New

York Harbor. It has considerable power, however, because it is authorized both to issue standards and to enforce them through the courts of the three member states. An entirely different role is served by the Potomac River Compact, created in 1940 by Maryland, West Virginia, Pennsylvania, Virginia and the District of Colombia. This organization functions purely on a research and advisory basis, and cannot initiate action. (A new and more powerful compact is under consideration.) An interstate compact with powers midway between the above two is the New England Interstate Water Pollution Control Compact, ratified in 1947 by New York and the New England States. The compact adopts standards, but responsibility for investigation and enforcement rests with the seven member states. The Ohio River Valley Water Sanitation Compact (ORSANCO), approved by Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Tennessee and West Virginia in 1940 and implemented in 1948, has the power both to establish and enforce standards, but this authority has been vitiated by the organization's own majority requirements for the adoption of such measures. ORSANCO and the Tri-State Compact have both issued compliance orders, but only the latter agency has actually sought relief in the courts. It has generally succeeded.

Despite the problems it involves and the criticisms which have been directed at it, the interstate compact device is the only workable plan for regional pollution control, short of direct federal intervention. Since the imposition of federal controls upon states runs contrary to the national tradition of federalism, efforts should be directed to devising machinery for interstate compacts which will meet criticisms, solve problems and furnish an effective instrument for intergovernmental cooperation.


POLLUTION IS A COMMUNIST PLOT!
SMOKEY THE BEAR FOR PRESIDENT! YOU CAN TRUST SMOKEY
WE ARE DOOMED?
STOP
TRASH IS UN-TIDY! AND UN-AMERICAN
LOSI

POLITICAL/LEGAL RESOURCE UNIT THREE: AWAKENING THE PROCESS FOR CHANGE

INQUIRY QUESTIONS

I. What is the role of public opinion and propaganda in forming environmental policy? 183

II. How can environmental apathy be subdued? 188

III. How can an individual effect environmental change? 190

IV. How do pressure groups promote improvements in government's environmental policies? 193

V. How do pressure groups impede improvements in government's environmental policies? 195

VI. If government could solve all of today's known environmental problems, what could the city of the future resemble? 196

VII. To avoid man's self-destruction, how can government restore and conserve the environment? 199

VIII. How can environmental problems be solved through international cooperation? 201

Inquiry Question: I. What is the role of public opinion and propaganda in forming environmental policy?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. READ/DISCUSS 1. Divide class into small groups. 2. Each group will study SC #1 (What is an Opinion), SC # 2(Quality of Personal Opinion) and SC # 20 (Expressions of Public Opinion). 3. After studying, each group will make a list of ways in which governmental policy is shaped by public opinion.	A. READ/DISCUSS 1. Student Comment (SC) # 1, page 206 2. Student Comment (SC) # 2, page 209 3. Student Comment # 20 page 254	A. READ/DISCUSS 1. Teacher Comment (TC) # 7, page 272 (participation) 2. Teacher Comment (TC) #'s 1, 2, 3, and/or 4, pages 258-261 (small group).	A. READ DISCUSS Before the activity begins the teacher should consider giving the Inquiry Question to the students so they could be thinking about it and watching for current information that pertains to it.
B. RESEARCH 1. In small groups students will compile examples of current environmental issues and suggest ways public opinion helps shape governmental policy in relation to it. 2. Oral reports will also be made in written form.	B. RESEARCH Students will need to use their library facilities, current newspaper and magazine articles.	B. RESEARCH Teacher Comment (TC) #'s 1, 2, 3, and/or 4, pages 258-261 (small group).	B. RESEARCH Teacher Comment (TC) # 11, page 279 (public pressure).
C. REPORT/DISCUSS 1. Small groups report to the class. Each group should be prepared to defend their positions that public opinion helps shape governmental policy in examples given and furnish supporting evidence. 2. By discussing, class will arrive at a conclusion to the Inquiry	C. REPORT/DISCUSS	C. REPORT/DISCUSS 1. Teacher Comment (TC) # 6, page 271 (oral report). 2. Collect and evaluate written work.	C. REPORT DISCUSS

Inquiry Question: I. What is the role of public opinion and propaganda in forming environmental policy?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Question. Activity # 2:			
A. READ/DISCUSS 1. Divide class into small groups. 2. Each group studies SC # 13, (propaganda and related subjects), and SC # 14 (types of propaganda). 3. Students should list the methods available to propagandists (SC # 13) and discuss which ones they have seen used to help form opinion in environmental matters. 4. Students should list types of propaganda and identify types they can remember having been used in environmental policy making.	A. READ/DISCUSS SC #'s 13, 14 pages 234-238	A. READ/DISCUSS 1. TC #'s 1, 2, 3, and/or 4, pages 258-261 (small group) 2. Teacher made test over reading material.	A. READ/DISCUSS 1. Teacher should have available sound film strip *Crisis of the Environment*, part 1,"Man: An Endangered Species." 2. Filmstrip may be borrowed from C.E.E.
B. RESEARCH/REPORT 1. Small groups should find examples of environmental propaganda which are used in a variety of media. 2. Groups should analyze pieces of propaganda to determine what propaganda techniques are used (loaded words, name calling etc.) 3. Groups should decide which techniques they feel are most effective and why? 4. Groups report to the class. The class should compare the group	B. RESEARCH/REPORT 1. Organizations and industries are excellent sources of free or inexpensive materials (leaflets, posters, newsletters) 2. Commercials on radio and TV, newspaper and magazine advertisements should be considered. 3. Other media	B. RESEARCH/REPORT 1. TC #'s 1, 2, 3, and/or 4, pages 258-261 (small group) 2. TC # 6, page 271 (oral report)	B. RESEARCH/REPORT 1. TC # 13, page 285 2. Selected Resources page S-37 (publication from a special interest group seeking humane treatment for animals)

Inquiry Question: I. What is the role of public opinion and propaganda in forming environmental policy?

Learning Activities	Resources	Evaluation	Teacher Suggestions
evaluations of effective techniques and draw up a list of characteristics they think essential for an effective work of propaganda.	should be considered: (songs, buttons, novels, bulletin boards).		
Activity # 3:			
A. READ/DISCUSS 1. Divide class into small groups. 2. Read SC # 15, (ways of dealing with propaganda) 3. Rank, as to effectiveness, the suggested ways of dealing with propaganda.	A. READ/DISCUSS SC # 15, page 239	A. READ/DISCUSS SC # 7, page 272 (participation)	A. READ/DISCUSS
B. REPORT/DISCUSS 1. Small groups report their rank order to the class and explain why they were so ordered. 2. Class compares the groups' suggested order and the reasons. 3. Arrive at one rank order that satisfies a majority of the class.	B. REPORT/DISCUSS	B. REPORT/DISCUSS TC # 6, page 271 (oral report) or TC # 7, page 272 (participation)	B. REPORT/DISCUSS Groups could present report in a panel discussion, insuring greater participation.
Activity # 4:			
A. READ/DISCUSS 1. Divide class into small groups. 2. Read SC # 16. 3. Discuss why pressure groups exist.	A. READ/DISCUSS SC # 16, page 240 (pressure groups)	A. READ/DISCUSS 1. TC #'s 1, 2, 3, and/or 4, pages 258-261 (small groups) 2. Evaluation of	A. READ/DISCUSS 1. TC # 12, page 281 (public opinion and pressure groups) 2. If students only list organizations trying to in-

Inquiry Question: I. What is the role of public opinion and propaganda in forming environmental policy?

Learning Activities	Resources	Evaluation	Teacher Suggestions
4. Make a list of groups or organizations who act to bring pressure where environmental issues are concerned.		lists.	prove the environment, the teacher should remind them that many groups in industry such as automobile manufacturers, are exerting pressure to slow down or modify legislation which would protect the environment.
B. RESEARCH/REPORT 1. Each group should choose an environmental pressure group and gather information on the propaganda techniques they use. Try to obtain copies of their publications so they can be analyzed for their propaganda value. 2. Each group should present a report to the class describing their group's objective, activities, and its success or failure in achieving its goals. 3. Then hold a class discussion as to how and why such organizations are effective.	B. RESEARCH/REPORT 1. Interviews with officers of local organizations. 2. Publications and newsletters of pressure groups.	B. RESEARCH/REPORT 1. TC # 6, page 271 (oral report). 2. TC # 7, page 272 (participation).	B. RESEARCH/REPORT The teacher should remind students that the term "propaganda" should not be used when interviewing people or writing for information because of the negative connotations associated with the word.
Activity # 5:			
A. READ/DISCUSS 1. Divide the class into small groups. 2. Each group should read SC # 17, (political polling).	A. READ/DISCUSS SC # 17, page 243	A. READ/DISCUSS	A. READ/DISCUSS

Inquiry Question: I. What is the role of public opinion and propaganda in forming environmental policy?

Learning Activities	Resources	Evaluation	Teacher Suggestions
3. Each group should discuss and list ways polls are helpful and the possible dangers involved in polls.			
B. RESEARCH/REPORT	B. RESEARCH/REPORT	B. RESEARCH/REPORT	B. RESEARCH/REPORT
1. Each group should formulate questions for a poll to find out how Congressmen feel about environmental issues. See SC # 18, (Rate Your Candidate) as an example. 2. Each group should give the class a copy of their questions. 3. The class should consolidate the best of each poll and come up with one poll. 4. A committee should be selected to send the poll to state legislators and Congressmen in Washington D. C. . 5. Results should be tabulated and interpreted by a second committee. 6. The committee should report to the class. The class will want to evaluate the answers on the poll to classify their representative in Tallahassee and Washington as to their stand on environmental protection.	SC # 18, page 247	1. TC #'s 1, 2, 3, and/or 4, pages 258-261 (small group). 2. TC # 7, page 272 (participation)	

Inquiry Question: II. How can environmental apathy be subdued?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. CONDUCT APATHY EXPERIMENT 1. Select a small area of the school grounds for the experiment. 2. Arrange with the administration and custodial staff to co-operate with the experiment. 3. Plan ways to make the selected area deteriorate gradually over several days. (add trash, etc.) 4. Notice how long it takes for someone to complain or do something about the situation and note who does act.	A. CONDUCT APATHY EXPERIMENT	A. CONDUCT APATHY EXPERIMENT Each student will keep a notebook on the comments that they hear and the behavior they observe during the experiment and will write their own analysis at the conclusion of the experiment.	A. CONDUCT APATHY EXPERIMENT 1. Be sure the custodians and administration know what you are doing. Stress to students that the experiment is "Top Secret" until its conclusion. 2. Daily checks with administrators and custodians are needed to reveal any complaints about the area.
B. REPORT/DISCUSS 1. Class will discuss the entire experiment. 2. Students will report on comments they have heard and observations they have made. 3. Students will discuss the degree of apathy revealed by the experiment in the school. 4. Students will suggest possible ways to overcome apathy in the school.	B. REPORT/DISCUSS	B. REPORT/DISCUSS 1. TC # 6, page 271 (oral). 2. TC # 7, page 272 (participation).	B. REPORT/DISCUSS

Inquiry Question: II. How can environmental apathy be subdued?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 2:			
A. SHOW/REACT 1. Show students cartoons illustrating public apathy. 2. Divide class into small groups. 3. Ask them to discuss and interpret meaning of the cartoons.	A. SHOW/REACT SC # 3, page, 211 (cartoons).	A. SHOW/REACT Students will write a paragraph in which they give their interpretations of the cartoons.	A. SHOW/REACT
B. DISCUSS/RESEARCH 1. Using the "Pattern of Constructive Thinking" (SC # 4) student groups will discuss, research, analyze and arrive at conclusions to the Inquiry Question. 2. Have students read SC # 5 as a beginning to their research. 3. Allow class time for students to work in a library locating materials.	B. DISCUSS/RESEARCH 1. SC # 4, page 212 2. SC # 5, page 214 3. Students should use library materials at their disposal. Use of the Readers Guide to obtain current information is vital.	B. DISCUSS/RESEARCH 1. TC #'s 1, 2, 3, and/or 4, pages 258-261 (small group). 2. Written research notes taken by students may be collected and evaluated.	B. DISCUSS/RESEARCH Go over the "Pattern of Constructive Thinking" with the entire class. Be sure each student has a copy to work with. Stress that students should go step by step and not jump over one step before it is completed. Stress the importance of all students being involved in the group research and discussion.
C. REPORT/DISCUSS 1. Having arrived at a small group conclusion to the Inquiry Question, the groups will report to the entire class. 2. Each report will be discussed and the class will agree on conclusions to the Inquiry Question.	C. REPORT/DISCUSS	C. REPORT/DISCUSS 1. TC # 6, page 271 (oral). 2. TC # 7, page 272 (participation). 3. Students may discuss in writing their group's answers.	C. REPORT/DISCUSS

Inquiry Question: III. How can an individual effect environmental change?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1: A. READ/DISCUSS 1. Have each student read SC # 6. 2. Lead class in discussion of this case study and encourage them to identify the tactics used by December Duke to protest environmental problems. Then have students identify the tactics used in this case study which they themselves might employ.	A. READ/DISCUSS SC # 6, page 218 (Tactics for Environmental Improvement)	A. READ/DISCUSS	A. READ/DISCUSS 1. Locate other appropriate case studies of individuals involved in environmental action, or expand this activity by having students look for additional examples through library research. 2. Background for Inquiry Questions III, IV, V, -Cassette tape entitled "Ecological Politics". Tape may be borrowed from C.E.E.
B. OBSERVE/RECORD 1. To increase each student's level of environmental awareness, instruct each student to keep a "Diary of Local Environmental Problems." 2. Students should record (a) problem, (b) location, (c) time observed, (d) change in situation.	B. OBSERVE/RECORD	B. OBSERVE/RECORD Teacher may collect the "Diary" and evaluate each student's effort and awareness in keeping this individual record.	B. OBSERVE/RECORD This activity should be assigned as homework. Decide the number of days allotted for assignment and require students to have this completed before section D of the activity is started.
C. READ/DISCUSS/RESEARCH 1. Have students read SC # 7, (Action for Environmental Protection) 2. After reading have students identify types of political information which an individual must have to ex-	C. READ/DISCUSS/RESEARCH 1. SC # 7, page 222 2. Students should use both school and public library for	C. READ/DISCUSS/RESEARCH Have students turn in a carbon copy of letter (s).	C. READ/DISCUSS/RESEARCH 1. Be certain that students identify local, state, and national environmental policy makers whom they might wish to contact (e.g.

Inquiry Question: III. How can an individualeffect environmental change?

Learning Activities	Resources	Evaluation	Teacher Suggestions
press himself generally and specifically. 3. Divide class into at least 3 small groups for research and discussion. Groups should specialize in (a) local, (b) state, or (c) national officials. Have each group research to find the following information: a. Names and mailing addresses of individuals currently representing them in offices identified in # 2. b. Important environmental issues, for which the official is responsible, that have arisen in the past 2 years. c. Current environmental issues or proposals for which these officials have responsibility. d. Voting record or stand of the officials under consideration on issues identified in b and c above. 4. Upon completion of research, have each group devise a rating scale by which they can evaluate their officials's environmental concern. Each group should establish criteria appropriate to the level of government which it has investigated. Then the group should evaluate each official whom they have investigated.	this research. Contact local environmental groups or League of Women Voters to secure voting records of these public officials.		councilmen, county commissioners, state legislators, Congressmen and Senators). 2. Though groups should organize and divide research responsibilities in class, instruct them to pursue much of their fact-finding as homework assignment. 3. Have each group supply class with names and addresses of officials for a students Environmental Action Notebook.

Inquiry Question: III. How can an individual effect environmental change?

Learning Activities	Resources	Evaluation	Teacher Suggestions
5. Have representatives from each group present their groups' findings and evaluations to the class. Class members should be allowed to question each others' findings and discuss rating scales. 6. Following above presentations, have each student select at least one official to whom he will write a letter expressing his views on the officials environmental position.			
D. ANALYZE/WRITE Have each student select one problem which he noted in his "Diary" and outline a proposal for individual action which might effect a change in that area. His proposal should include those tactics which he thinks might be employed by individuals.	D. ANALYZE/WRITE	D. ANALYZE/WRITE Collect student papers and grade.	D. ANALYZE/WRITE Have students implement some of the proposals which are suggested. If so, class might decide on most worthy projects and organize committees for implementation.
E. DISCUSS Lead class in summary discussion of Inquiry Question.	E. DISCUSS	E. DISCUSS As an alternative or supplement to discussion, students may be asked to write an essay entitled "How I Can Effect Environmental Change."	E. DISCUSS Be sure the student recognizes the importance of these: 1. awareness of environmental problems. 2. responsibility to educate himself for action. 3. various tactics which may be employed.

Inquiry Question:

IV. How do pressure groups promote improvements in government's environmental policies?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. INVITE GUEST SPEAKER 1. Invite a speaker from one of the local environmental organizations listed in Selected Resources, page S-28 to talk about how his organization has worked to bring about improvements in environmental policies of government. 2. Have students prepare questions in advance to ask guest speaker during discussion period. Students may wish to ask questions pertaining to current environmental problems and the action which the speaker's organization is taking to remedy these.	A. INVITE GUEST SPEAKER	A. INVITE GUEST SPEAKER 1. TC # 7 page 272 , (participation during question and answer period). 2. Collect student questions and notes for evaluation.	A. INVITE GUEST SPEAKER TC #'s 15, 16, 17, pages 296-304
B. DISCUSS Have students discuss speaker's presentation during following class meeting. Class discussion should focus upon efforts being made by local environmental pressure groups to bring about improvements in governmental policies concerning environment, techniques used, and success in achieving stated goals.	B. DISCUSS	B. DISCUSS TC # 7 , page 272 (participation).	B. DISCUSS

Inquiry Question:

IV. How do pressure groups promote improvements in government's environmental policies?

Learning Activities	Resources	Evaluation	Teacher Suggestions
C. READ/DISCUSS 1. Have students read SC # 19. 2. Lead class in discussion of article and to conclusions concerning the Inquiry Question.	C. READ/DISCUSS SC # 19, page 250 (Tactics to Influence Environmental Policy)	C. READ/DISCUSS	C. READ/DISCUSS Teacher may also use TC # 14, page 287 , "Environmental Lawsuits Against the Government" for his own background or may have it reprinted for students.

Inquiry Question:

V. How do pressure groups impede improvements in government's environmental policies?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1: READ/DISCUSS/LIST 1. Have students read SC #'s 8, 9, 10. 2. Having read the SC's, have the students define "a lobbyist" and "a pressure group" and to identify as many possible pressure groups as they can which might impede effective environmental policies. 3. All definitions and possible pressure groups will be listed on the board and discussed.	READ/DISCUSS/LIST 1. SC # 8, page 225 , (The Emerging Regulatory-Industrial Complex). 2. SC # 9, page 228 , (A Roadblock to Environmental Protection). 3. SC # 10, page 229 , (A Day With A GM Lobbist).	READ/DISCUSS/LIST Teacher-made quiz could be given on definitions and reading assignments.	READ/DISCUSS/LIST 1. Encourage open, thoughtful discussion of the reading assignment in helping students arrive at definitions and lists of pressure groups. 2. Background for this Inquiry Question, TC #'s 18, 19, pages 305-314
Activity # 2: A. PLAY ROLES Conduct the simulation game, "Conflict in Redwood Country" (TC # 9).	A. PLAY ROLES 1. TC # 9, page 274 2. If at all possible, rent the film "The Redwoods" - Associated Films, New York, New York.	A. PLAY ROLES 1. TC # 7, page 272 , (participation). 2. Student research and preparation for the role could be evaluated.	A. PLAY ROLES
B. DISCUSS/LIST Drawing from Activities # 1 and 2, the students will discuss the Inquiry Question, list possible conclusions and decide upon the best conclusion.	B. DISCUSS/LIST	B. DISCUSS/LIST	B. DISCUSS/LIST

Inquiry Question: VI. If government could solve all of today's known environmental problems, what could the city of the future resemble?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1: A. DEVELOP CONCEPTS 1. "Design your own city," by dividing class into small groups and having each specialize in one of these areas: transportation, housing, industry, recreation, and government. 2. Groups are to envision "concepts" of ideal solutions to present city problems that would be of minimum harm to the environment as a first priority. 3. To aid in this development have students utilize the following: a. Cassette tapes b. SC #'s 11, 12.	A. DEVELOP CONCEPTS 1. Cassette Tapes (a) list includes: --"The Death of Our Cities" --"Transportation Mess" --"No Place to Flee" (b) Can be borrowed from C.E.F. 2. SC # 11, page 231 (Development of a Key). 3. SC # 12, page 233 lists a number of books for background reading.	A. DEVELOP CONCEPTS TC #'s 1, 2, 3 and/or 4, pages 258-261 (small group)	A. DEVELOP CONCEPTS 1. Following are ideas each group may need to keep in mind: Government group will need to restructure local government so that needs of environment are first, hence personal freedoms may be restricted by law; Housing group will need to consider population control (birth control/immigration) so that housing will be adequate and not crowded (encourage housing group to make needs known to government group); Industrial group will need to consider how it can use natural resources without depleting or destroying them (encourage industrial group to recommend laws to government group); Recreation group might need to invent new leisure time activities that contribute to rather than strain the environment (encourage them to suggest needed laws to government group);

Inquiry Question: VI. If government could solve all of today's known environmental problems. what could the city of the future resemble?

Learning Activities	Resources	Evaluation	Teacher Suggestions
			Transportation group will need to invent new modes of people movers (encourage group to "talk" to government group in an effort to avoid "restrictive" laws being passed). 2. Background for this Inquiry Question: a. Cassette tape entitled "Urban Slurb." b. Tape may be borrowed from C.E.E.
B. REPORT/DISCUSS 1. Each group prepares a report on their area and accompanies it with visual aids. 2. Report to the class. 3. Allow class to question each presentation.	B. REPORT/DISCUSS Provide "art materials" necessary to construct visual aids.	B. REPORT/DISCUSS 1. TC # 6, page 271 (oral). 2. If written report is required, collect and evaluate content. 3. TC # 8, page 273 (visual).	B. REPORT/DISCUSS
C. CORRELATE/DISPLAY 1. Students select one person from each small group to act as "Planning Board." 2. "Planning Board" correlates all reports/visuals, makes requests for additional drawings and even models in an attempt to display the	C. CORRELATE/DISPLAY	C. CORRELATE/DISPLAY 1. TC #'s 1, 2, 3, and/or 4, pages 258-261 (small group). 2. TC # 8, page 273 (visuals). 3. Teacher may	C. CORRELATE/DISPLAY

Inquiry Question: VI. If government could solve all of today's known environmental problems, what could the city of the future resemble?

Learning Activities	Resources	Evaluation	Teacher Suggestions
"city" designed by the class.		wish to have a panel of judges (teachers, students) not directly involved in project to make an evaluation.	
Activity # 2 : A. PLAY ROLES 1. Conduct the simulation "Sitte". 2. This simulation is not provided in this package and must be ordered from the producing company. 3. Brief description of simulation: (a) Each participant is a member of a different group: business, disenfranchised, government, taxpayers association, and an ad hoc committee for parks and trees. (b) The game is divided into DECISION periods during which each group decides how it will use its particular "influence points" to gain its ends for city planning. (c) The details of the game are intricate enough to simulate real life. For example during the game, the groups may tell the mass media anything they want issuing press releases; but they have no control over the media's decisions about printing their statements.	A. PLAY ROLES 1. Order game kits from Western Behavioral Sciences Institute, 1150 Silverado, La Jolla, California, 92037. 2. Cost - $35 for 25 students $50 for 35 students.	A. PLAY ROLES The simulation is evaluated, in part, at the end of each period by an "analyst" who keeps score of the points, decides the consequences of each groups' actions and starts a new round of play with a new set of decisions.	A. PLAY ROLES

Inquiry Question:

VII. To avoid man's self-destruction, how can government restore and conserve the environment?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1:			
A. LISTEN/DISCUSS 1. Divide class into 3 groups. 2. Listen to tapes - one tape per group. 3. Each group discusses and records the type of environmental problems mentioned in the tapes.	A. LISTEN/DISCUSS 1. Cassette tapes: a. Shoulder to Shoulder (population control) b. The World As A Wastebasket c. Nuclear Power: Life or Death 2. These can be borrowed from C.E.E.	A. LISTEN/DISCUSS TC #'s 1, 2, 3, and/or 4 pages 258-261 (small group).	A. LISTEN/DISCUSS 1. Students should be encouraged to turn the tape off when they think a new problem is presented and discuss whether it is a new problem or a different aspect of one already listed. 2. Ask students to recall a tape from an earlier Activity, "The Transportation Mess" which discussed the problems involved with moving masses of people.
B. RESEARCH/DISCUSS 1. Student groups will research, discuss, analyze and arrive at solutions to problems listed. 2. Attention should be given to whether or not the solution requires new laws. If so, which levels of government are involved and are constitutional changes necessary?	B. RESEARCH DISCUSS Students should make use of all library materials at their disposal. Use of the Readers Guide to obtain current material is vital.	B. RESEARCH DISCUSS 1. TC #'s 1, 2, 3, and 4, pages 258-261 2. If written research is required, collect and evaluate.	B. RESEARCH/DISCUSS Background for this Inquiry Question: TC #'s 20, 21, pages 315-330

Inquiry Question:

VII. To avoid man's self-destruction, how can government restore and conserve the environment?

Learning Activities	Resources	Evaluation	Teacher Suggestions
C. REPORT/DISCUSS 1. Each group will prepare a written report of problems, proposed solutions, and laws needed. 2. Reports of each group will be made to the entire class. 3. Class will discuss and evaluate solutions offered, and draw a conclusion to the Inquiry Question.	C. REPORT/DISCUSS	C. REPORT/DISCUSS 1. TC # 6, page 271 (oral). Allow entire class to use this form to evaluate reports. 2. TC # 7, page 272 (participation). Students should be reminded that evaluation should be kept on an impersonal basis.	C. REPORT/DISCUSS

Inquiry Question:

VIII. How can environmental problems be solved through international cooperation?

Learning Activities	Resources	Evaluation	Teacher Suggestions
Activity # 1: A. VIEW FILMS/DISCUSS 1. Show Buckminster Fuller's films. 2. Divide class in small groups and discuss the films considering these points: - What are Fuller's main ideas for a quality environment? - What specific needs of man are considered in this plan? - What do you think will stand in the way of this plan? - How can these impediments be removed? - Are Fuller's suggestions reasonable? Why? Why not?	A. VIEW FILMS/DISCUSS 1. Films: - "More with Less" (# 6), - "Playing World Game" (# 7), - "Playing World Game" (# 8), - "Playing World Game" (# 9), - "World Game Can Work" (# 10). 2. Inquiries about film rental: (a) Michael Percival, Saturn Pictures Corp. 10 West 56 Street, New York New York 10019. (212) 736-4225, or (b) check local university film centers.	A. VIEW FILMS/DISCUSS TC #'s 1, 2, 3, and/or 4, pages 258-261 (small group).	A. VIEW FILMS/DISCUSS 1. For a brief description of the "World Game" concept see TC # 10, page 278. 2. For further information: a. order "World Game Series Document One" from World Resources Inventory, 206 West College, P.O. Box 909, Carbondale, Illinois, 62901 b. Each copy $4.00 plus 50¢ postage. 3. If selectivity of the films is necessary, the last two listed (#9 and #10) appear to be the most comprehensive. Each is 30 minutes long.

Inquiry Question:

VIII. How can environmental problems be solved through international cooperation?

Learning Activities	Resources	Evaluation	Teacher Suggestions
B. REPORT/DISCUSS 1. Each group presents their answers to the questions. 2. Allow class to question reports. 3. Class then decides on a conclusion to the Inquiry Question.	B. REPORT/DISCUSS	B. REPORT/DISCUSS 1. TC # 6, page 271 (oral). 2. TC # 7, page 272 (participation).	B. REPORT/DISCUSS Background for this Inquiry Question: TC #'s 5 and 22, pages 262, 330.

STUDENT COMMENTS

STUDENT COMMENT NO. 1 : What Is An Opinion?

Exactly how does one define an opinion? An opinion is what you think about a controversial subject, whether it be an issue that affects the nation, such as ending the war; one that concerns your community, such as the building of a new school; or one that relates to your personal life, such as dating, smoking, or religion. The important word in the definition is "controversial." Disagreement is necessary in order for an opinion to exist.

It is unlikely that you have an opinion about every subject. If you do, you might ask yourself on how much thought and on how much knowledge are your opinions based. However, you probably do have strong opinions on matters of importance to you. In fact, the closer the topic is to your life, the more likely you are to have an opinion about it. Social scientists who measure public opinion find individuals more confident of themselves when they express opinions about personal behavior, local affairs, and products than when they comment on national issues and foreign affairs. Individuals may have strong opinions on national or international problems or social issues when these directly affect them in some way.

Some subjects, of course, do not tend to evoke opinions. When almost everyone in a group agrees with an idea or a way of doing things, opinions do not exist. Instead, there are beliefs. These are ideas which have gained universal acceptance by a group and are regarded as "facts" by the people involved. Such agreement is usually based on experience. For example, no responsible person in the United States today seriously challenges the need for law enforcement, even though there are differences of opinion as to what techniques policemen should use and what role they should play. The need for policemen is itself a matter of fact.

While most beliefs can be related to experience, some are based on agreement which has grown out of scientific evidence. Still others may be accepted on faith. And, at times, situations develop in which there exists widespread agreement on an idea that has no basis in reality. Some five hundred years ago, for example, it was widely believed "fact," not a matter of opinion, that the earth was flat.

Therefore, a belief is based on what individuals agree to be "fact," whether or not these facts are absolute. An opinion is what an individual thinks to be the case in a controversial situation. A public opinion is the view of a group of people who express agreement on a controversial issue. Because there are many groups or publics, there can be many public opinions on one issue. Many times the term "public opinion" is used to describe mass opinion - what large numbers of people think. However, it can also be used to describe the opinions held by smaller, more specialized groups. In your school, for example, teachers may represent one opinion, the students another, and the administration another. As a result, when someone states that public opinion is tending in this direction or that, it's well to pin him down as to which public he is referring.

In almost all situations, it is more common to find opinions and disagreement than facts and agreement. Moreover, what one individual or one group considers to be fact may be judged by another as no more than opinion. You need only to read a daily newspaper to find evidence of this. Competing political parties disagree on everything from defense spending to education. Members of the same party hold diverse opinions. In addition, business and labor hold differing opinions on may issues; so do residents of different states and residents of the same state; so do businessmen and those not in business, men and women, old and young.

The most ordinary means of resolving conflicting views is compromise. For the sake of agreement, each side accepts some of the views of the other side. Of course, if a large majority favors a particular approach, it is likely that compromise will be avoided and that one approach accepted. Because disagreement is a fact of life, compromise is important at all levels of human activity - in governmental affairs as well as in club activities, in relationships with our friends, and in our relationships at home. Taking the other person's opinions into account is one of the primary ways in which we conduct our affairs.

One of the great strengths of the democratic system is the freedom to disagree, to hold opinions that differ from those of the majority and yet openly express one's own views. In the United States, the only opinion that may not legally be expressed is one that urges overthrow of the government by violent means. All other opinions are permitted, no matter how unpopular they may be. In guaranteeing the rights of all individuals and organizations to speak out, we protect our own rights. In addition, we encourage a continuing flow of ideas, some of which may improve our system.

This is theory. In reality, the right to express differing opinions is not always respected. Social pressure can limit an individual's absolute freedom of expression. There have been cases in which individuals' opinions differed so much from what most people in a town felt, or from what important groups felt, that the individuals who held these opinions lost their friends and jobs. They have even been threatened with physical violence. Such repressive action is in violation of both the theory and the spirit of democracy.

STUDENT COMMENT NO. 2 : The Quality Of Personal Opinions

There are basically two kinds of opinion; informed and uninformed. The real quality of one's opinion will depend largely on whether it is an informed opinion or an uninformed opinion. The characteristics of these two kinds of opinions are given in the following paragraphs.

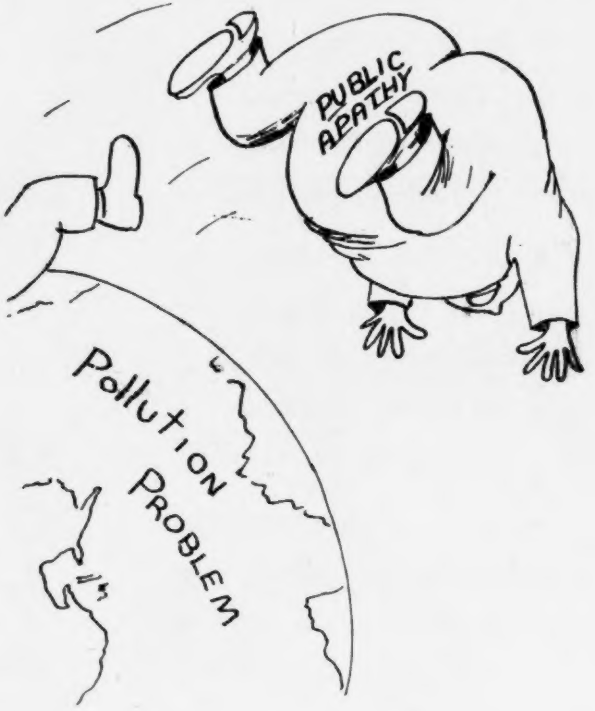
THE UNINFORMED OPINION. Many people hold very "strong" opinions on many issues which they actually "know" nothing about. Uninformed opinions may develop out of the stereotypes a person has as to some specific reference group such as "Negroes," "Jews," "Indians," "Japanese," "Catholics," etc. The uninformed opinion may also derive from one's emotional attachment to symbols such as "the flag," or from ones emotional interpretation of words such as "freedom," "liberty," "law and order," "justice," "constitution," "socialism," "communism." One of the characteristics of the uninformed opinion is that it is based on very little real factual information. The information on which it may be based is usually very limited, narrow, and unproven.

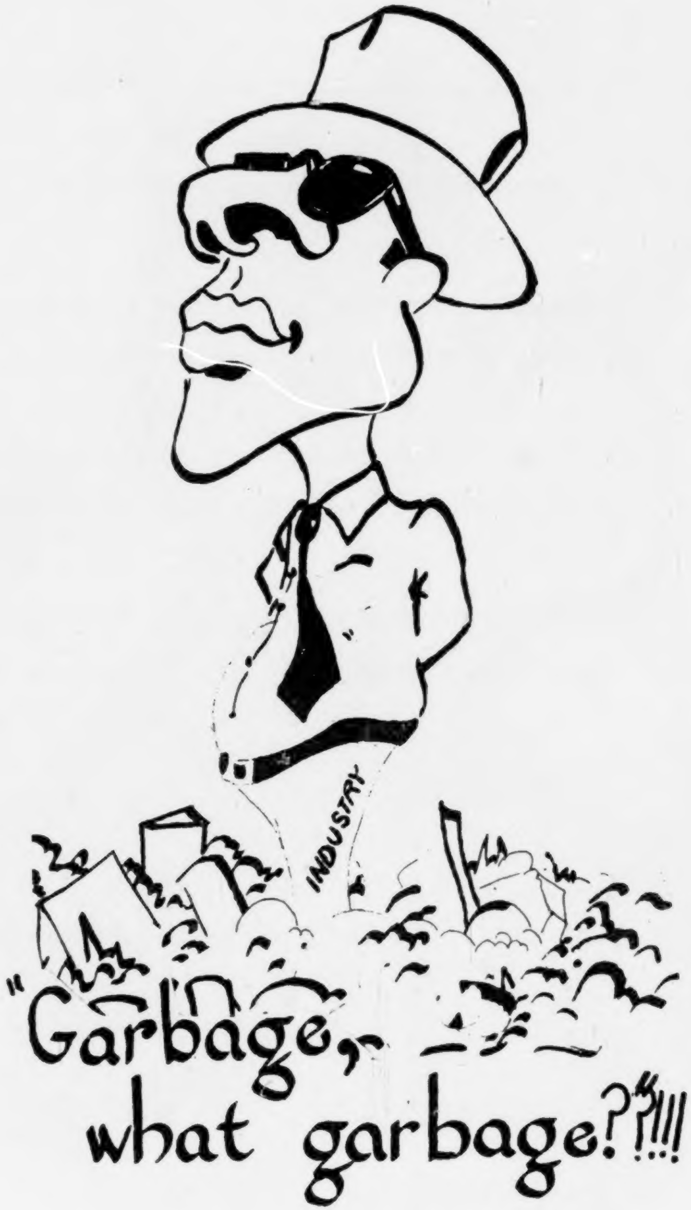
THE INFORMED OPINION. One of the major characteristics of an informed opinion is the degree of differentiation employed; that is, the discrimination among events, people, and other types of information in such a way that it is relevant to the opinion. A person with the ability to differentiate is more aware of alternative responses and develops a more "informed" opinion on the issues. In order to have an "informed" opinion, one must understand the implications of his opinion. For example, one can not really believe in "free speech" and at the same time support efforts to stop certain groups from exercising free speech. If one's opinion is an informed one he will be aware of all of the implications and be prepared to deal with them. The informed opinion is based on a variety of information and sources of information. It is arrived at by the careful and objective evaluation of all of the variety of information by as many means as possible.

The informed opinion is not influenced by stereotypes or by prejudice in any form. The informed opinion rests with factual information which can stand up to scientific testing or the test of time.

STUDENT COMMENT NO. 3 : Apathy

"THE BEGINNING OF THE SOLUTION"


PUBLIC APATHY
Pollution PROBLEM


INDUSTRY
"Garbage,
what garbage?"!!!!

STUDENT COMMENT NO. 4 : Patterns of Constructive Thinking

Step I Identify the Problem

1. Agree on the goals you are seeking.
2. Be sure each member of the group understands the wording of both the problem and the goals.

Step II Analyze the Problem

1. Explore the nature and worth of the goals.
2. List all of the possible barriers to the goals.
3. Research the problem and find out what has been done or is being done about it now.
4. Consider and discuss what will happen if nothing is done about the problem.

Step III Suggest All Possible Solutions

1. Suggest ALL possible solutions. The greater the choice, the better are the chances of getting the best solution. Be creative! Brainstorm for possible solutions. Don't be critical at this step, just suggest any and all possibilities.
2. Solutions are possible ways to remove the barriers to the goals or get around the barriers in some way or revise the goals in light of the barriers if they are insurmountable.

Step IV Select the Best Solution or Solutions

1. Think through and discuss all of the possible solutions which have been suggested. Weigh and compare the good and bad points of each suggestion.
2. Decide on the solution or solutions which the group finds to be the most desirable.

Step V Suggest Ways to Implement the Solution

1. Decide how you can put the solution into effect. This is the "how to get it done" step.
2. Just what will it take to put your solution into effect: Will you have to: (a) change the law (b) study more (c) secure more money

Notes on Using the "Pattern of Constructive Thinking"

1. It is designed to be used by groups of not over 12 students.
2. It is designed to be used in a free democratic type of group discussion where each student must assume his fair share of research and discussion.
3. The group should select a group leader and a group recorder. The leader will simply help get them started each day and will see that they are following the "Pattern of Construtive Thinking" on a step by step basis. The recorder will keep a daily record of what the group decides on and where they begin and stop each day. This will be the "official" record.
4. Each student should keep his own record of daily activities and prepare himself for the next day's activities in advance.
5. Always remember that co-operation is essential for the group to function well. Always show respect to each member of the group and encourage each member to participate fully in the group's work.

STUDENT COMMENT NO. 5 : What Can Be Done?

Individual citizens can accomplish a great deal in defense of their environment, if they are willing to persevere over a long period of time. Six case histroies of individuals who would not be deterred from an environmental objective, attest to the possibility of effective citizen action.

The preservation of the Sandusky River in north central Ohio can be traced back to the individual efforts of the owner-operator of a camera shop in the town of Fremont, Ohio, on the Sandusky River. Ray Grob, an avid outdoorsman and Boy Scout leader, had long been concerned about the gradual degradation of the Sandusky from farmland run-off, silt deposits and industrial discharges. Author of an outdoors column for the local newspaper, Grob used the column as a forum for an idea of making the Sandusky a scenic river, legally protected against commercial development and pollution. He developed a color slides presentation and showed it to service and civic clubs and government and business leaders. He compiled an illustrated brochure concerning the scenic and recreational value of the Sandusky. The turning point came when a friend who was sympathetic to Grob's views was elected to the state senate. He introduced a scenic rivers bill calling for Grob's original idea of protecting several Ohio waterways. The bill was passed, protecting designated rivers and authorizing the state to seek federal funds for clean-up projects and recreational development. Public interest sprung up along the 70-mile protected stretch of the Sandusky. Frenmot sponsored two new parks, and Grob's Boy Scouts "adopted" a one-mile stretch of riverfront to plant and maintain.

The possible destruction of a herd of dwarf Tule elk on government-owned land in the Owens Valley in California was prevented by a citizens' drive initiated by a Los Angeles housewife. Mrs. Beula Edmiston discovered that the state fish and game commission, in order to reserve part of the elk's natural habitat for leasing to cattle ranchers, had regularly authorized the slaughter of a certain quota of elk. By 1960 the herd was down to 300, and the commission announced that the year's kill would be 150 head. Outraged, Mrs. Edmiston and 14 others attended a public hearing to protest the order. She organized a campaign of collecting money and writing letters, and finally got the commission to agree to a herd limitation of 250 head from 1961 to 1969. Not satisfied, Mrs. Edmiston prodded the news media to cover the "hunt." It was discovered that helicopters were used to herd the elk together in front of hunters, to be butchered all at once. She helped arm reporters with questions that state biologists couldn't answer. The result was a public re-evaluation of the situation which led to the passing of a state law to halt the slaughter of the Tule elk and restore the herd to 2000 in California. In addition, there is a bill to convert the elk habitat into a national wildlife refuge under consideration in Congress.

The last free-flowing wild river in Arkansas owes its preservation to the efforts of a young lawyer from Shreveport, Louisiana, Wellborn Jack, Jr.. Realizing that the Gillham Dam project on the Cossatot River would destroy the last natural stream in the state - the others had already been altered by five previously built dams - Jack organized public resistance and called upon the Army Corps of Engineers to suspend construction of the final dam in the project until a re-examination of its impact on the environment could be conducted. Jack enlisted the aid of the Ozark Society, a regional conservation group. Other organizations became involved, forming a coalition against the dam. A "float-in" involving 102 canoes, was conducted to publicize the cause. Films were shown at area garden clubs and to state and local officials. The Corps of Engineers ignored them. Determined to force the engineers to consider the ecological consequences of the Gillham Dam, the Arkansas conservation groups, aided by the New York based Environmental Defense Fund, filed suit against the project. Five months later a court injunction halted the project. The Corps has recently given indications of an attempt to revive the project, but any such effort would meet with staunch resistance from the conservationists.

An excellent example of how much a single citizen can do in the fight against pollution is evident in the case of Wayne M. Harris, a Rochester lawyer. Long dedicated to the preservation of the environment, Harris spends about 20 hours a week in voluntary efforts against pollution. Working through the Monroe County Conservation Council, Harris has successfully agitated for new laws to control air, land and water pollution. He has pushed and prodded public officials into greater efforts against pollution. He has filed lawsuits against polluters and hiked through woods and streams collecting water samples and charting the location of sewage outlets.

Persistence is Harris's greatest asset in his one-man crusade. When his committee was informed about a possible radiation leak from an atomic reprocessing plant near Springville, New York, Harris obtained a geiger counter, trekked through the woods until he located the plant's discharge pipe, took readings, had tests conducted and determined that the waste material was 6,000 times greater than the radiation limit specified by the Atomic Energy Commission. The plant did not take steps to correct the situation. Harris carried the matter to a national level, contacting Senators Javits, Muskie and the late Robert Kennedy. Finally the AEC directed the plant to correct the situation.

In 1970, Harris achieved a long-sought objective: the establishment of Delta Laboratories, Inc., an independent environmental testing lab. Answering to no industry or government agency, Delta provides environmentalists with a place to obtain concrete evidence against polluters. Harris has been active in fund-raising to support the labs. Although he recognizes the importance of general public involvement in the environment protection movement, Harris emphasizes the need to compile factual support for an environmental case. "If you talk in general terms about lost beauty and how the rivers are full of junk, you'll get nowhere. To impress the politicians and bureaucrats, you need test results, expert witnesses, sample photos, statistics." *

The fifth example of effective citizen action on behalf of the environment occurred in Palo Alto, California, where Mrs. Howard W. Harrington presented the Palo Alto branch of the American Association of University Women with a unique project - making up an environmental handbook for housewives. That they did. After a year of research and organization, the group published the paperback, *If You Want To Save Your Environment...Start at Home.* ** The book has had four printings, with more than 75,000 copies sold in every state and more than 30 foreign nations. The project retains 35 active women to answer mail, keep accounts, send out copies of the book and deliver talks to area groups.

A similar women's campaign was initiated in Washington, D.C. by Mrs. Nancy Ignatius, wife of the former secretary of the Navy, and Mrs. Richard Helms, whose husband heads the nation's intelligence network. Determined to bring the vast "woman power" of the nation to bear upon the ecological crisis, they set up an organization known as Concern, Inc.. Their basic tactic is to turn consumer power in favor of the environment by researching, publishing and distributing ecological shopping lists, advising housewives which products are best for the environment. The first list, titled "Eco-Tips," reached more than 50,000 people in early 1970. *** Two additional guides have since been produced.

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* *Changing Times,* "What Can You Do to Clean up the Environment? Plenty!", (Washington, D.C.:March *1972),* p.10.

** 75¢, from Mrs. Harrington, AAUW, 774 Gailen Court, Palo Alto, California, 94303.

*** Concern, Inc., 2233 Wisconsin Avenue, N.W., Washington, D.C., 20007.

STUDENT COMMENT NO. 6 : Tactics For Environmental Improvement

Can you feature yourself decked out in a papier-mache alligator costume parading up and down a busy New York City street to protest in front of a store which was selling items made from alligator hide?

This was one of many activities engaged in by 19-year-old December Duke in the role of environment activist, as described in Constance L. Stallings' essay "It's June in December." A graduate of a Miami high school, December became interested in organizing young people to help preserve the environment. She was hired by scientist Luther Gerlock to interview young people and determine their awareness concerning the environment. She and Philip Spitzer, 21, organized a group of about 40 high school graduates under the name "Environment!". For advice, she wrote to Wes Fischer, head of the University of Minnesota's Students for Environmental Defense. She found the tactics used by Fisher's group to be "dramatic." "Environment!" embarked on a similar course.

Its first tactic was to roam up and down the beach at Key Biscayne, searching for people who dropped litter and speaking to them concerning the cost of cleaning up the mess they were creating. In most cases the litterers proved to be embarrassed and apologetic. The campaign has had a marked effect. Every other week "Environment!" activists continue to patrol the beach, and lifeguards have started issuing one-dollar tickets for littering.

The second move by "Environment!" did not meet with as sympathetic a reaction. The young people accosted women on the streets of Miami who were wearing animal-skin coats, making comments like, "Did you know that five leopards were butchered for your back?".* December reported that most women who were spoken to appeared unimpressed by the environmentalists' argument.

The next target for "Environment!" was the ineffective Miami sewage treatment system. December

* Constance L. Stallings, "It's June in December", *Ecotactics*, (N.Y.: 1970), p. 90.

came up with a truly dramatic stunt to demonstrate the pollution which was being dumped into Biscayne Bay - the "Peanut Shell Caper." "Environment!" "raiders" flushed peanut shells down the toilets of Miami's City Hall. Shortly thereafter hundreds of peanut shells were observed bobbing up and down in the water of Biscayne Bay! Even though the tactic was reported, Miami has yet to act to clean up its waste disposal facilities.

Another target for December's group was the Turkey Point nuclear power plant, 20 miles south of Miami, which was causing thermal pollution to the water near the plant. Plant officials denied the charges of South Florida conservationists, but the point was dramatized when December's volunteers went skin-diving on weekends immediately offshore from the Turkey Point plant. The water was found to be so hot that it caused the divers headaches after 10 minutes. Although Turkey Point continues to operate, "Environment!" had at least indicated clearly the effects it was having upon the environment.

Probably the biggest of December's Florida projects was a drive to educate high school and university students to the potential environmental damage which would be caused by the construction of a jet port in the Big Cypress Swamp north of the Everglades. National Audubon Society representative Joe Browder introduced December to the problem, taking her to the site of the proposed jet port and explaining the ecological harm it could cause. December immediately wangled permission from the Dade County Commissioners to conduct group visits to the jet port site, under the pretext of archaeological exploration (ironically, fossils WERE exposed by the keep pits gouged out during preliminary construction). Each weekend, December led caravans of high school and college students into the swamp, explaining the ecology of the area and the possible consequences of the jet port. "Environment!" members continue to conduct tours through the swamp and give talks at local schools, attempting to increase public awareness of the delicately-balanced ecology of the Everglades.

Activists are not necessarily radicals, according to December. She points out that even political conservatives have rallied to protect the environment, especially when areas close to home were threatened. December intends to work both inside and outside "the system." In September, 1969, December began studying at Katherine Gibbs Secretarial School in New York City.

> "I want to learn all about big business and industry, and the mind of the polluter." she explains. "I need to know their ways. Knowing, maybe I can change them a little. Have you ever thought what would happen if there were a nationwide secretarial strike?" **

Notwithstanding her "inside" role, December continued her environmental activism as well. She and a friend, Tom Stokes, formed a New York "Environment!" organization. It was supported entirely by funds from friends. December claims that even foundations which donate money to preserve the environment must answer to the industries which do the polluting.

The alligator costume ploy, which received substantial coverage in the newspapers, was just one of many dramatic activities carried out by New York "Environment!" in the interest of what December terms "participatory ecology." On another occasion, some 40 representatives of several conservation groups, including "Environment!", picketed Ben Kahn's, a New York furrier. The signs they carried claimed that 60,000 cat skins were imported illegally every year. This time the action had immediate success; shortly after the pickets left Kahn pledged no longer to import skins from endangered species.

New York "Environment!" was not content to deal with independent businesses, however. They went after the big as well as the small. One bitterly cold day, a dozen young people picketed in front of the General Motors Building on Fifth Avenue, carrying enlarged photographs of exhaust fumes billowing from automobile tailpipes and aerial views of cities blanketed in smog. They also distributed flyers containing statistics from the Congressional Record which blamed General Motors for one-third of the air pollution in the United States, and the auto industry in general for over 60 per cent. Clad in knee-high boots, a pea jacket

** Constance L. Stallings, Op. Cit., p. 92.

and a yellow mini-skirt, December braved the 12-degree temperatures to walk up to pedestrians with a smile and inform them that General Motors was killing us all. The entire demonstration was very well received. There was no resistance. Even the police officer on hand was accommodating to the pickets. Everyone appeared to agree that General Motors had no right to destroy the air.

December's New York activists plan participatory activities every weekend. They hope to arrange a Bike Day with cyclists pedaling through the downtown Wall Street district to protest the internal combustion engine. They are researching means of recycling waste materials in useful ways. They plan to educate citizens to take the initiative on making pollution complaints, including the picketing of supermarkets which sell non-biodegradable detergents. They encourage housewives to take the trouble to return bottles. A trip, similar to December's Everglades tours, is being planned to Machiasport, Maine, where oil refineries threaten the coastline.

December attends school from 9a.m. to 3:30 p.m. and spends nearly all her afternoons and weekends working for "Environment!". She does research and speaks to groups such as "Citizens for a Quieter City." She believes in teaching ecology at an early age, and has guided her 9-year-old brother on tours of a Long Island wildlife preserve. On a recent trip home her brother applied his lessons well, calling for their mother to answer for her leopard-skin coat!

December realizes that not all the activities planned by environmental groups will solve the problems they seek to expose. But she believes that it is essential to educate and organize people against pollution now if constructive action is ever to result.

And although she is presently "stationed" in New York, December continues to keep an eye on the environment in her home state. When she discovered that several Miami beaches had been closed (except for sun-bathing) due to the danger of typhoid from polluted water, December promptly prepared a pamphlet for distribution at airports across the United States. Its title -"Don't Go to Florida Without Your Typhoid Shot!"

STUDENT COMMENT NO. 7 : Action For Environmental Protection

What action can the individual take to fight air pollution and water pollution and preserve natural resources? Place less value on personal convenience and more on social responsibility, answers Judith Voliner Wilson, an environmental planner with the Miami office of the National Audubon Society. In her essay "Individual Action," Mrs. Wilson explains that the solutions to environmental problems will depend on the willingness of individual citizens to alter their life styles and adopt a new code of values. She stresses the importance of many separate individual efforts. Like votes, they DO count. With the survival of the earth in the balance, each person either contributes to the problem or works toward the solution. And anything less than an active commitment to solution represents a contribution to the problem. There can be no middle ground.

One area of active commitment open to the average citizen is to participate in an urgently-needed drive to educate voters to informed participation in government. Only widespread efforts by individuals will be able to offset the tendency of industries and government either to contribute to pollution or to delay effective action against it. Volunteers are needed to conduct scientific and legal research, talk to school groups, type materials, attend and report on public hearings and many other activities. Many different talents are required.

Another channel of environmental protection is group action. Individuals have a responsibility to find and join a conservation group whose beliefs are compatible with their own. Even if they do not have the time or the inclination to participate actively, they should at least lend greatly-needed financial assistance.

Political action is a third possibility. The best weapon in protecting the environment is increased individual involvement in legal and political aspects of the solution and prevention of environmental problems.

Knowledge of givernment is of primary importance. Citizens should know their representatives at all levels of government and determine their stands on environmental issues. The only certain way to do this is to find out their voting records, because nearly all politicians may be expected to support conservation and oppose pollution in their public statements. But what have they done in a decision between economic development in their constituency and potential damage to the environment? And even voting records may not give a true picture. Committee assignments should be checked to ferret out legislators who pass conservation bills only after rendering them virtually useless by watering them down in committee. It is also important for citizens to write to their representatives. They often await response from their constituents before making a final decision on how to vote on an issue. Typed, personally-signed letters carry much more weight than duplicated materials. Anyone who takes the time to write and sign his own letter can be expected to check the legislator's voting record and cast his own ballot on an informed basis. Whether a letter provides a detailed analysis of an issue or merely sets forth a request for support or opposition to a measure, it DOES COUNT. Letters should be sent to opponents as well as allies, because changing their votes is critical to the ends of the environmentalist.

Faced with a specific threat to the environment, how can the individual go about combatting it? The first step is to know existing laws, and whether they provide for strict enforcement. Before proceeding, environmental groups must know whether to push for new legislation or simply more effective administration of existing laws. It is also essential to know which government officials will be most responsive to public pressure, and which have the authority to make or enforce decisions. Citizens should be sufficiently informed on the structure of government to seek those officials who are most likely to be receptive to their wishes. Public hearings can be an effective forum for citizens if they take the time to organize. Environmental groups should coordinate their efforts and present solid arguments based on scientific or economic facts. Research should be done on the issues involved; if studies don't exist, they should be initiated. People qualified on various scientific and economic factors pertaining to the situation should be called upon to testify. Facts are far more important than emotional appeals to save the environment, because the opposition is often represented by professional public relations men who present arguments on the economic advantages of an environment-damaging project, or the prohibitive expense of proper waste control. Environmentalists can most effectively counter sucn arguments by stressing the long-term economic benefits of preserving natural resources. Good local press coverage should also be sought, as it often helps offset the professional caliber of the opponents' spokesmen.

Public awareness can be an effective means of preserving the environment, but it is often necessary to carry the matter into the courts. Legal action could consist of a formal objection to stop potentially harmful land-use proposals, or filing a lawsuit against a major corporation of an agency of the government for violating existing pollution laws. Although the average citizen cannot afford the costs of legal action, environmental groups can. They may include in their membership lawyers who are willing to work at cost, or be able to locate outside attorneys or law firms who will donate their services to a case involving the protection of the environment. Individual citizens can often be of considerable assistance to lawyers in conducting research pertaining to non-technical aspects of the case.

In conclusion, Mrs. Wilson calls for a strong personal commitment to the movement to bring man into harmony with his environment--a commitment which is able both to sacrifice personal convenience and to withstand public resistance to an unpopular cause if necessary. If the issue is popular, the citizen-environmentalist is likely to become a hero. But if the cause is unpopular, he must have the integrity to stick to the responsible course of action.

STUDENT COMMENT NO. 8 : The Emerging Regulatory-Industrial Complex

One of the most formidable obstacles to effective regulation of industries which pollute the environment is the tremendous political influence which these industries exert on the very government agencies which are supposed to be regulating them. According to Robert C. Fellmeth, author of the chapter, "Divesting the Regulatory-Industrial Comples," in *The Voter's Guide to Environmental Politics*, industry's influence upon government regulatory bodies operates in four major areas.

The first area of influence is in the middle levels of the government bureaucracy where most policies are formulated. At these formative levels, rules can still be altered on a more or less informal basis. For this reason, industries maintain large and permanent lobbies in Washington which wield heavy influence, both fromal and informal, over the regulatory agencies. Industrial leaders and lobbyists maintain constant contact with "advisory" groups which discuss prospective policy decisions by various agencies. Fellmeth claims that thousands of letters of complaints from consumers, including complaints involving pollution, are discussed in secret conferences between agency members and industry leaders and then new rules are formulated to meet the public relations needs of the companies. The consumer can propose amendments to such rules, but only through public hearings, after they have passed through the bureaucracy and are no longer subject to change without a major "hassle." Consumers are hardly represented at all at the middle bureaucratic levels where the decisions are made; few, if any, agencies have consumers or consumer representatives on their advisory boards, nor do they consult consumer groups for informal opinions as they do industrial leaders. Even "outside" groups called upon to conduct "objective" surveys on agency policies are also under the influence of industry, Fellmeth charges. He takes as an example the recent "outside study group" recommendation that passenger train service be discontinued on a number of railroad lines. Virtually ignoring environmental considerations (mass transit is an alternative to heavily-polluting automobile traffic), the group's suggestion "happened" to conform to the wishes of the railroad companies. A study revealed that 15 of the 17 railroads seeking a discontinuance of passenger service had done business with the "independent" firm which advised the government agencies to discontinue the service.

A second method of persuasion exercised by industry upon the agencies who are supposed to regulate it is an elaborate process of entertainment of agency personnel. Industries keep extensive files on important agency officials, keeping track of birthdays of sons and daughters, anniversaries, hobbies, favorite foods, etc. The cumulative effect of these remembrances, Fellmeth asserts, is not monetary, but to build up the impression of deep personal concern and friendship. The process is revealed in the Nader Reports of the summer of 1969 when it was shown, for instance, that over the past three years Interstate Commerce Commissioners have taken approximately 220 trips to attend industry conferences in places such as Hawaii, Puerto Rico and the Bahamas (or the home states of agency officials), when industries were already well represented with executives in Washington. One commissioner publicly estimated that 75 per cent of expenses from such trips are borne by the government, out of public tax dollars.

A third factor creating a close link between industry and government regulatory bodies is job interchange. A substantial number of agency officials were former employees of the industries to be regulated. An equally significant number of regulatory agency attorneys use the position as a springboard to industrial posts later on. More than 50 per cent of the former Commissioners of the Federal Communications Commission have become high-level executives in the communication industry. Ten out of 11 former ICC Commissioners have either assumed positions directly within transportation industries, or have worked for the industry as "ICC practitioners." Fellmeth refers to the process of hiring regulatory agency officials into lucrative industrial executive positions as a "deferred bribe" which helps make the government agencies conform to the wishes of the industries they are supposed to control.

The fourth area of industrial influence in Washington is in the appointment and hiring of agency officials. If Congress threatens to control or break up the regulatory-industrial combination, industry counter-attacks with strategic pork-barrelling (lobbying for the allocation of economically-advantageous federal projects to certain regions of the country in repayment for political favors) and campaign contributions. Millions of dollars have been contributed by industry to the re-election campaigns of key congressmen who are able to influence appointments to regulatory agencies. As a result, these agencies are often headed by "puppets" of industry. Fellmeth observes that only four of the current 11 Interstate Commerce Commissioners have experience with law, economics, anti-trust regulation, rate regulation or transportation. Two of those four come from the industry being regulated. All 11 have political "sponsors," and the majority have been involved in party politics for a long period.

The result of industry's four-fold influence upon the regulatory agencies of the federal government is a very close agreement of corporate and regulatory views--to the benefit of the induatries, of course. In fact, industries have crossed competitive lines to establish large lobbies in Washington. Lobbying itself is a business--much of it tax deductible, no less! The result has been extravagant industry spending designed to maintain influence over regulatory agencies. Industry is highly organized, well-financed and professionally represented. Consumers, on the other hand, lack organization, funds and representation. Therefore, even those agency officials who are not directly or indirectly linked to corporate interests are exposed largely to industrial, rather than consumer viewpoints, and as such are inclined to develop a pro-industry bias.

STUDENT COMMENT NO. 9 : A Roadblock to Environmental Protection?

Air pollution. Since we all breathe, we all have a vital interest in this national problem. A logical solution would be a tough crackdown on smoke from industry and unyielding high standards concerning automobile exhaust systems. In Congress, proposals like these are referred to committees. As they evaluate proposals, the committees are almost certain to be besieged by lobbies from various special interest groups which are paid to present the views of their group. Automobile manufacturers, for example, could be expected to marshall an impressive array of lawyers, scientists and expert witnesses to argue that proposed standards for pollution control are nearly impossible to meet without seriously damaging the economy. Equally professional representatives for manufacturers can be expected to produce "mountains" of eveidence "proving" that industrial smoke is not a major component of air pollution. Other special interest groups would probably be involved; labor, for instance, might argue that the imposition of clean-air standards on industry would force plant shut-downs and cause unemployment.

The views of such special-interest groups are clearly and forcefully presented before Congressional committees which must make decisions concerning the environment. But how about the views of the average American who has to breathe the air which other people insist they must pollute? For the most part, these people are without effective or organized representation before the legislators who determine policy. Even those people who speak out for clean air dynamically and publicly do not command nearly as much influence with Congressional committees as the lobbies described above, because they represent no clearly defined interest group.

Excerpt from article by Congressman Morris K. Udall and Congressman Paul N. McCloskey

STUDENT COMMENT NO. 10 : A Day With a GM Lobbyist

A GM lobbyist has no set routine. His job is to react. He is a combination commentator and counter-puncher. His day is shaped by others.

For GM lobbyists James M. Morris, William C. Chapman and Jay G. Hall, the day begins before 8:00 a. m. with its one predictable activity--reading. To keep abreast of Congress and the various agencies affecting GM, they scan the day's news for schedules of committee hearings, upcoming floor actions and proposed rule-making.

Two to three hours are spent each day in reading. The reading list includes The Washington Post, The New York Times, National Journal, Congressional Quarterly, The Bureau of National Affairs Daily Executive Report, The Federal Register and relevant items from the previous day's Congressional Record.

By 9:30, the GM lobbyists are in the office with enough of the day's reading behind them so that the day's assignments can be made. Depending on what Congress is doing, this might include attending committee hearings, observing floor debate, going to a chamber of commerce or business association meeting or simply visiting with a key legislator or staff member to ensure that the lines of communication are kept open.

For Morris, this means spending at least 50 per cent of his time out of the office. For Chapman, who is assigned to the controversial safety and pollution issues, it means spending even more time away from the office. Chapman also makes frequent trips to Detroit to report in person on developments in his areas of responsibility.

The burgeoning of government activity affecting automobiles has restricted the free time GM representatives have to make calls on Capitol Hill, according to Morris. "It would be highly desirable to visit more often with legislators and staffs, but we are limited by the small staff and the demands on our time."

For William D. Thompson and Albert D. Bourland, who are not yet registered to lobby, the year since they came to the Washington office has been spent largely in acquainting themselves with the people and the workings of the government.

Bourland's duties as manager of the office limit the time he has to get acquainted on the Hill. He estimated the office management chores take up to 80 per cent of his day.

For B. E. (Gene) Ritzinger, who has been in Washington for less than two months, and who is not registered to lobby, work in the Washington office is not unlike the reporting he once did for The Wall Street Journal. He is assigned to cover congressional hearings and occasionally to write reports based on information fed to him by Morris and Chapman. These reports are sent on to Detroit.

While Congress is in session, the lobbyist's day does not end until 6 or 6:30 p. m., and often he is required to attend meetings in the evening. When an important bill affecting the industry is under consideration by Congress--as is the case with the Clean Air Amendment--these evening meetings can run often and late.

STUDENT COMMENT NO.11 : Development of a Key

2-B THE MIAMI HERALD Sun., April 2, 1972

Key Biscayne: A Paradise Lost?

By FRED TASKER
Herald Staff Writer

Hiram A. Riviere says he's 84, and he says he doesn't give a damn that he could sell his Key Biscayne house to the apartment builders for four or five times what he paid for it in 1953.

"I don't care about money," he says. "I came here to live."

The old man's house is valuable because it sits just off Key Biscayne's main street, Crandon Boulevard, on land with zoning that would permit a 12-story apartment building, built almost lot line to lot line, containing as many as 87 units per acre.

"I DON'T WANT honky-tonks here," Riviere said. "People used to live very comfortable there until the promoters came in to get a fast buck."

Many of Riviere's fellow Key residents agree. It was they who put up the sign that reads: "Key Biscayne — Island Paradise Welcomes You," and they say they're sorry that their paradise seems to be slipping away from them.

They're sorry the Key is losing its sleepy, small town atmosphere, where the sidewalks are painted green and young girls with long hair ride bicycles-built-for-two on them; where the Chamber of Commerce for 50 cents sells bumper stickers saying "Key Biscayne is the Good Life;" where cattle egrets flutter and poke among the coconut palms on land that's zoned for 12-story apartments.

They're sorry their paradise is about to get its second traffic light.

THEY'RE SORRY all this is being replaced by the Miami Beach-style condominiums that are filling in the oceanfront — the 27-story Casa Del Mar, the 190-unit Commodore Club, even the attractive Mayan-style Sonesta Beach Hotel.

"Most of the buildings are ugly — just blocks of concrete," Edie Epstein, another Key Biscayner complained as she munched a cheeseburger at Vernon's Drug Store and tried to get Carolan, 4, to finish at least part of hers. "They're just ugly; no sense of design."

"I preferred it when we had no street lights and not so many people," Mrs. Epstein continued. "I used to know everybody by their first names; we don't have that any more."

The owner of the drugstore, Richard L. Vernon, said he favors the building moratorium, but added: "Those developers paid a pretty penny for that land, so if they're not allowed to build on it, they should be compensated in some way."

Now the big buildings are becoming part of all the Key Biscayners' lives.

"YOU MEAN you don't like Bob Griese's new house?" kidded mailman Ed Arlt, waving a batch of letters at a four-story office building going up under the name of the Miami Dolphins' star quarterback.

"I'll be frank with you. I don't like it," Mrs. J. M. Lehman replied.

"Oh, it's not that bad," scoffed her husband. The Lehman's house, at 115 Hampton St., falls in the early morning shadow of the office building.

"The guys are tossing it around whose route that monster is on," the mailman said. "Look at Earl Swain," he continued. "He got the Seaview and the Towers of Key Biscayne. Think he's not crying?"

THE RESIDENTS say these are some of the reasons they fought for the building moratorium enabling ordinance that voters finally approved in the March 14 referendum. And it's why they applaud County Manager Ray Goode for using his new power only 15 days after he got it to slap a temporary building ban on a major piece of Key Biscayne's oceanfront.

Some of the residents say they rue the day, Nov. 9, 1947, when the Rickenbacker Causeway was finished and dedicated. It had been built after the Matheson family, which had owned the whole island and used it as a coconut plantation, offered Dade County a big part of the island as an oceanfront park if the county would build a causeway to the mainland.

SOMEHOW, in the post-war enthusiasm of the late 1940s, more than 100 acres of Key Biscayne's oceanfront were zoned to allow apartments.

The opening of the park, the building of the causeway and the new apartment zoning gave birth to what now has become a geometric progression of population on the key.

Visions of future disaster were drawn in a 1971 county traffic analysis. It concluded that, if all land on the island were developed to the limits of its zoning, the average weekday traffic across the causeway would become almost as thick as the standstill traffic that now occurs with the winter season's Sunday peak hours.

HIRAM RIVIERE says he isn't going along with that, and that he "Absolutely approves" of the county manager's building ban.

Riviere's neighbors for several blocks around are in the same position, living in $25,000-to-$40,000 houses on land zoned for apartments. Like Riviere, many of them would be willing to give up their chances at quick profit and have county zoners rezone their land back to single-family status.

The county zoners are trying to do just that. The Metro Planning Department, after studying the area for two years, has written a "Key Biscayne Environmental Design Study."

The study's recommendations would not prohibit apartment building on much of the key's valuable land. But they would cut the permitted density from 87 units per acre to 50, and they would require builders to place the apartments farther apart and farther back from the ocean and from Crandon Boulevard.

ANOTHER major recommendation of the study, however, is to remove the apartment zoning from the several square blocks around Riviere's house, and replace it with single-family zoning.

The first hearing, before the Zoning Appeals Board, will be April 17.

But rezonings take time, especially if they end up in the courts, and one of Riviere's neighbors was offered $60,000 for his small house and lot by the apartment builders recently.

This is why Riviere and others approve of Goode's use of the temporary building ban. And it's why many of them will appear before the Metro Commission on April 18, when commissioners must decide whether to extend the ban for its full 90 days, to give county planners enough time to complete their rezonings.

THOSE WHO LIKE the building ban say it came just in time. Goode has said the ban stopped at least three apartment projects — of four, eight and nine stories — that were about to receive building permits.

Some Key residents feel the zoners should go further.

"The builders should just be not allowed to build," said Steve Tennis, 15-year-old high schooler who lives on the key and works as a volunteer at Crandon Children's Zoo. Steve wants the county to buy the land, turn it into parks and pay for it by charging admission.

Beverly Woods, 24, another zoo worker on the key has a different idea. "They give farmers money out West not to grow things," she said, cuddling a Wooly monkey to her neck, "they ought to give people money here not to build things."

Some Key residents feel the county zoners should not go so far. Wilfred Johnson, who lives just down the street from Riviere, says he wants to keep the apartment zoning on his house and lot.

DRESSED in bermuda shorts and T-shirt, Johnson was on his knees, pulling the grass from around the cactus in the front yard of his neatly landscaped house.

"I plan to sell in about 10 years," he said, wiping the sweat from his forehead, "and then take an apartment in the building that goes up here."

Johnson said he approves of the building ban, but only to allow time for more facilities — new sewers, better roads, perhaps a new causeway — to catch up with the apartment building.

"You can't buck progress; let's face that," he said.

Even more strongly against the ban was a union carpenter, helping build a four-story addition to the oceanfront Royal Biscayne Hotel, who said he's rather not have his name in the newspapers.

"THIS IS going on on Miami Beach all the time," he said, waving a calloused hand at the hotel construction, "I don't know why they want to stop it here.

"Anyway," he went on, "I can't see as there's too much land left, at least along the ocean." He replaced his yellow, plastic hard hat with its American flag on either side, tucked a chisel back into his wide, leather tool belt, and went back to work.

Just up the street, security guard Octavio Jordan sat in the gatehouse of the 11-story, oceanfront Sands Hotel.

"A ban is not good for the economy of the city," he said. "Many people, especially low class people, have income from construction.

"This is anti-democratic, I believe," he concluded.

BUT HIRAM A. Riviere says he'll never sell his land to the apartment builders.

"It'll never happen in my lifetime. Damn condominiums," he said, turning back to the sapling avocado his son planted for him last week.

"Soil's too salty here since Hurricane Betsy," he said. "Got to replace it with good sweet soil so it'll grow."

And avocados can take years to bear fruit.

STUDENT COMMENT NO. 12 : Reading References (City Planning)

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STUDENT COMMENT NO. 13 : Propaganda: Method, Use, and Scope

The word "propaganda" had its origin in the effort of the Catholic Church to "propagate the faith" during the century following the reformation. The Church established the "Sacra Congregation de Propaganda Fide" to act as its "propaganda" agency. Since that time, the word "propaganda" has come to be used in many different spheres of life.

The scope of propaganda today is very great. It is not limited to any particular field of life. Propaganda plays a very important role in politics, religion, economics, and areas of morality which are sometimes found halfway between politics and religion. Everyone is exposed to some form of propaganda almost daily at home, at work, or at play.

Propaganda is used to "induce" one to act. It doesn't compel one to act and therefore, it depends on communication to be effective. It trys to appeal to the non-thinking side of man in order to get him to either do or believe something. Propaganda is used for the purpose of affecting behavior. A typical propaganda situation is when the propagandist by one method or another communicates with his target so as to affect the target's behavior. Negative propaganda is sometimes used to try to undo what some other propagandist has already done through positive propaganda, or to prevent rather than bring about a change in the behavior of the target. Propaganda may be used to get someone to support a particular political candidate, to buy some product, to accept some religious belief, to support their nation in wartime, to prevent some change from taking place, to smoke, not to smoke, to wear their hair in some particular style, to hate some particular group, to like some particular group, etc. The list of things which propaganda might be used for is really endless.

There are many different ways in which the propagandist may practice his art. He may appeal to people's emotions or to their intellect. In most cases, propaganda is designed to appeal to the emotions. Propaganda operates on all of the emotions; fear, pride, greed, sympathy, self-respect, ambition, love, hatred, courage, desire for prestige, sense of adventure, patriotism, etc. The real effectiveness of propaganda depends upon the strength of the emotions already existing in the minds of the targets. Propaganda may be presented in many different forms. It may be found in the spoken work, the printed word, in pictures, in patriotic or revolutionary songs, on the radio, on television, in the press, in pamplets, leaflets, tracts, or "novels with a purpose," in satires, in rumors, in truth, in half-truth, in false-hood, or in almost any form which the human mind can comprehend.

Propaganda as such is morally neutral. The propagandist may use either false information or the truth if it will help his accomplish the desired results. If the end result the propagandist is seeking is "good", he is most likely to use truth and honorable methods in his propaganda. If the end result is "bad", he will usually be more unscrupulous and use any methods of propaganda to achieve his desired goals.

STUDENT COMMENT NO. 14: Weigh the Facts

Contemporary society is so complex that most of our information is relayed to us at second or third hand. Often, it is difficult to determine whether the information given to us is completely accurate. We are expected to trust our sources of information; however, we should also approach all information with a critical attitude. If you question something you are told or read, it is wise to cross-check with one or two other sources. Of course, should a speaker or writer be an authority in his field, it is fair to assume that his information is correct, unless he is involved in a controversy in which other experts have different viewpoints. In this case you should then judge the evidence of both "experts" and reach a decision. In evaluating information, one should remember that the same set of facts can be interpreted differently by two individuals or two publications, depending on their attitudes. It is then necessary to distinguish between facts and opinions or assumptions about facts.

PROPAGANDA. In certain cases, information we are fed to us may be selected to get us to believe or behave in a certain way. This is the technique of propaganda. Almost every day, propagandists influence at least some of our thoughts and actions. The propagandist may be an employee of a public relations or an advertising agency, but it is just as likely that he is an amateur. The most basic advice one can give about propaganda is to be aware that we are all constant targets. In important issues, you should seek the source of propaganda and attempt to understand the persuader's purposes. In addition, it is useful to be aware of his methods. Some principal methods are discussed below.*

Loaded Words. These are words with strong emotional connotations that go well beyond their dictionary definitions. For example, the propagandist might associate an idea he supports with such words as "motherhood," "country," "family," "home," "God," "protection," or "progress." If the proagandist is attacking an idea, he will employ other loaded words. "Dishonest," "un-American," and "wasteful" are some examples. Everyone possess attitudes, ideas, and interests the propagandist can appeal to. Consequently, loaded words are likely to appear in all propaganda.

Name-Calling. The possibilities for name-calling are unlimited. This technique is usually employed by an individual attempting to discredit another individual or group. Two of the most common terms used,in the United States in recent years, to attack or undermine individuals are "Communist" and "Red." These two names imply that the individual so described is a threat to the American way of life. Name-calling is too often used by political candidates who may describe an opponent as "unqualified," "inexperienced," or "demagogueish." The opponents may reply by referring to their opponents as "puppets manipulated by political bosses."

Flattery. The propagandist also exploits our desire to be respected and highly thought of. He will rarely attack the good sense and intelligence of his audience. It is rather the opposition that is "dishonest" and "dangerous." Flattery is frequently used in political speeches, magazine advertisements, appeals for money, and television commercials.

Appeals to Authority. The names of leaders and experts of all types are used by propagandists to lend "seals of authority and approval" to goods, ideas, or whatever is being promoted. Since President Nixon believes this, the reasoning goes, that should be enough for you. A variety of this technique is called "transfer." Here an idea or a movement is associated with a highly respected symbol. The most frequently used transfer is the displaying of an American flag at a meeting or rally.

Bandwagon. The psychology here is that because so many people are thinking on doing this, it must be right. You are also told that if you don't join in, you'll be left behind.

Plain Folks. The goal here is to give people the impression that the propagandist is the same as they are. Politicians attempt to convey this impression by a great deal of joke-telling and hand-shaking.

The Big Lie. This is a purposeful falsehood of great magnitude that is repeated again and again until it is accepted. Adolf Hilter was the master of the big lie. His basic and most successful lie was convincing Germans that they were members of an Aryan race superior to all other races.

* From a classification developed by the former Institute for Propaganda Analysis; reported in American Journal of Sociology, September 1945.

STUDENT COMMENT NO. 15 : How to Deal With Propaganda

Everyone is subjected to propaganda daily. To be able to evaluate propaganda and arrive at informed opinions is the challenge facing each of us. If we wish to maintain a form of government in which the people make free choices of leaders and in which the people exert a great deal of influence over public decisions, it is essential that we learn how to deal with propaganda. The following methods could be most helpful in achieving this goal:

a. Seek out people with many different points of view and listen carefully to each of them.
b. Avoid listening to individuals who are extremely prejudiced and who are obviously presenting a slanted point of view.
c. Read many different magazines and books which present varying points of view.
d. Check up on and test any idea or product and see if it does what its advocates have said it will do.
e. Develop informed opinions on all major issues so that you will be able to recognize propaganda when you see or hear it.

STUDENT COMMENT NO. 16 : Pressure Groups and Propaganda

Pressure groups are organizations whose aim is to further the special interests of their members by influencing public opinion. These pressure groups are the most frequent users of propaganda. Regardless of whether you agree with their goals, pressure groups serve an important function in a democracy by giving a voice to the ideas a large number of people hold in common. Virtually every segment of life is represented by a pressure group. For example, the AFL-CIO is the voice for many working men, the National Education Association for many teachers, the U.S. Chamer of Commerce for many businessmen. Many interest groups also hire lobbyists to help present their views to federal and state governmental officials. The purpose of these lobbyists is to influence lawmakers to make decisions favorable to their peculiar interest.

Other pressure groups are less concerned with promoting the interests of a particular group of people than with advancing ideas they judge to be of benefit to society as a whole. The National Audubon Society, a leader in the movement to conserve natural resources, is one such organization.

Some pressure groups have large nationwide memberships, while others have a relatively small membership which works on the state and local levels only. The Florida Defenders of the Environment is a group organized specifically for safeguarding Florida's natural beauty. Some pressure groups have long-range goals and consequently long lives, while other organizations are formed to influence one particular issue and disband once their immediate goal is attained.

Pressure groups usually exert far more influence than might be expected from the size of their membership. Highly dedicated personnel and good organization compensate for small numbers. When individuals organize and unify, their efforts tend to be far more efficient and effective.

Propaganda activities of some type are utilized by most organizations. The type and quantity of propaganda varies with the size and purposes of the organization. One part-time volunteer or a committee of volunteers is usually given responsibility for propaganda in small groups. A full-time professional staff is often times employed by the larger and wealthier organizations.

An organization's propaganda program is frequently executed all or in part by outside firms. Over four thousand advertising agencies, along with hundreds of public relations firms, offer this service. Hill and Knowlton, which was established in 1927, is the largest and one of the oldest of the public-relations firms. This firm caters primarily to companies and business organizations. It operates eight offices in the United States and has representatives in twenty-eight other countries to serve its clients' interests. Its services are broad and typical of those offered by other such firms. Assistance in effective communication with stockholders, business reporters, employees, and with the general public is one important service performed by this firm. In addition, it assists its clients in campaigns for or against proposed laws, develops pamphlets, brochures, and other publications for distribution in schools and elsewhere, provides advice on maintenance of good relations with cities and towns in which business operate, prepares speeches for executives, and even tries to arrange audiences where these speeches can be delivered. The public relations firm also researches the public's attitudes and opinions as a basis for its work.

There are well over a quarter of a million people in the U.S. who are full-time propagandists; and thousands of others who work at the job on a part-time basis. In fact, thousands of individuals and organizations in this country spend over $15 billion yearly in an attempt to influence others to think and behave as they desire.

How effective are such efforts? Results vary. Sometimes opinions are changed. However, propaganda is believed to be more successful in strengthening existing attitudes than in altering them. Yet one would be foolish to dismiss propaganda as ineffective. Too many cases have indicated it to be highly effective. Consequently, it is very important for the individual to be able to recognize propaganda when confronted with it. This is not always easy. It is beneficial to maintain an awareness that propagandists are at work and that you are frequently their target.

STUDENT COMMENT NO. 17 : Political Polling

Political polling has become an integral part of the American election process. Two types of polls are utilized in the politics of an election year: public polls and private polls. The former aim to satisfy the interest of the electorate as to who is ahead in an election race and who is likely to win. Private polls, which are not widely publicized, function to help parties and candidates develop campaign strategy.

The Public Polls. The major political polls are conducted by three men and their organizations; George Gallup, Elmo Roper, and Louis Harris. In addition, a number of organizations poll on a state basis, including the Florida, Iowa, Texas, California, and Minnesota polls. City and state races are sometimes analyzed by newspaper polls.

The professional pollsters have perfected their polling techniques over the years to the point that their forecasts have become highly accurate. The pollsters' success in predicting the results of recent presidential elections indicates their competence. In national elections since 1950, the Gallup figures have varied from the final result by an average of approximately 1.9 percent. The pollsters, however, are quick to admit that the polls have gone wrong in the past and could go wrong again.

Pollsters use "trial heats" to reach their conclusions. In these heats, pollsters ask a representative sample of voters to decide between the major candidates as if it were Election Day. In the Gallup Poll surveys in the 1968 race, voters were asked this question: "If the presidential election were being held today, which candidates would you vote for -- Nixon and Agnew or Humphrey and Muskie?"

If the voter exhibited uncertainty, he was then asked: "As of today, do you lean more to Nixon and Agnew or more to Humphrey and Muskie?"

Following the nomination of candidates for a presidential race, the Gallup Poll conducts four trial heats. The first is held in early September, just after the campaign has officially begun, and the final survey is completed three or four days before Election Day in November. Pollsters draw conclusions concerning the outcome of the race from the results of the last trial heat, as well as from information collected in earlier heats. Many factors must be considered however, in making a final judgment.

One such factor is determining who is going to vote and who is not going to vote. The pollsters' calculations can, of course, be thrown off by inclusion of responses of non-voters. Gallup interviewers ask each individual interviewed a special set of questions so as to weed out the non-voters.

Another factor to be considered by pollsters is how the undecided will probably vote come Election Day. In recent years about one in five voters have postponed making a decision until the campaign is well under way. Election results are oftentimes determined by the choice this group makes. The goal of the researcher is to obtain as clear an impression as possible as to how the "undecided's" will vote. For this reason, Gallup researchers try to make it as easy as possible to select a candidate.

How to Evaluate the Polls. The success of a pollster is usually evaluated on the basis of whether he selects a winner. It is, of course, more sensible to rate his performance on the basis of *how close* he comes to estimating the actual vote. By contemporary standards, a pollster merits a superior rating if he comes within a point or two of the final result, no matter who wins.

While public polls can be exciting to follow, their importance is founded on other reasons as well. They encourage public interest in politics and, at the same time, contribute to a better understanding of the American political process by providing a storehouse of information on voting behavior and on the effects of major issues on voting.

The Private Polls. Public polls focus upon who is ahead; private polls focus upon why. Campaign strategy is determined by reference to how people regard the candidates and the issues. In fact, public opinion is used far before an election to help determine which of the possible candidates would have the best chance of winning. Research of this type is not widely publicized, but is intended for the use of only those politicians involved. Although private research is quite expensive, with fees ranging from $5,000 to $100,000 and higher, its use is increasing rapidly. Research is used by presidential, congressional, gubernatorial, and mayoral candidates. Research is directed to a determination of the candidate's strengths and weaknesses among key groups, the condition of his image, and the issues which he should emphasize.

Key Groups. The pollster seeks to illuminate which groups support the candidate and which groups support the opposition. The pollster differentiates between the attitudes of men and women; racial, religious and national groups, occupational and socio-economic groups; and age groups. Politicians use the projected reactions of these key groups in deciding who the candidate should be. The candidate who can build a wide base of support from a coalition of various key groups is most likely to win any given election.

Image. In image research, a primary objective is to discover how well voters know who a candidate is and what he has done. Another objective is to determine how voters perceive the candidate. Such information is helpful to the candidate in emphasizing certain personality traits, playing down others, and eradicating wrong ideas.

Issues. In his private research, Louis Harris would request that voters describe the problems they felt the government should act on. Analysis of these replies was made by key groups, including two of great importance: the candidate's hard-core support and the undecided voters. Thus, it was possible to determine which issues were bringing a candidate support, which were costing him votes, and which were having no effect. Harris reveals that oftentimes the candidate and the people are far apart on which issues are important and which are not. From this type of research, candidates are guided as to which issues to emphasize.

Private research is obvisouly useful to politicians; however, criticisms of this process have been noted. First, say critics, private polls cause excessive emphasis to be placed on a candidates personality and image, qualities that may have little to do with how effective a leader or lawmaker he will be. Secondly, critics charge that private polls tend to discourage politicians from speaking out in favor of unpopular issues which they might otherwise support. Pollsters deny both of these charges. Critics also express concern regarding the use of private polls for propaganda purposes. For such purposes, the parts of research that favor the candidate are "leaked" to the press by the candidates staff, while less favorable findings are not revealed. The result is to present an incorrect - in fact, a dishonest picture - of where the candidate stands. Because of this possibility, most pollsters now reserve the right to publicize the entire study if portions are used dishonestly.

STUDENT COMMENT NO. 18 : Ecological Attitudes Poll

One kind of poll is to find out how your governmental officials feel about a particular topic. The following questions might be sent to your representatives in government to find out what their atitudes are on the issue of conservation. Would this poll tell you anything about whether or not those responding to it are friends or enemies of conservation?

ECOLOGICAL ATTITUDES POLL

I. Land and Water Conservation Fund

The amount of money in this fund has not been sufficient to finance new National Parks, Seashores, and Recreation areas; or to match state expenditures for expanding outdoor facilities.

Are you in favor of a program of adequate financing for the Land and Water Conservation Fund? YES______ NO______

Have you voted for adequate financing in the past and specifically for the bills urged by the major conservation organizations? YES______ NO______

II. Estuarine Areas

Thousands of miles of the tidal marshes, coastal bays, and shallow sounds which make up America's estuaries are being destroyed by dredging and filling, oil exploration, and garbage dumping. These areas are very important for providing a habitat for birds, water-fowl, mammals, and fish.

Are you in favor of the Estuaries Act which would require that all estuaries be inventoried, and that Federal, state, and local governments will develop plans to conserve and restore areas suited for wildlife and recreation? YES______ NO______

III. Management of Public Lands

Up until the 1920's, public lands were being disposed of on a large scale. Finally in 1964, Congress made an attempt to provide adequate management on lands to be retained in public ownership. Congress voted to extend the Classification and Multiple Use Act for three more years in 1968.

How did you vote on the original bill and on the extension of the act? YES______ NO______

Do you support the present classification activities of the Bureau of Land Management? YES______ NO______

Do you favor using public lands for a variety of purposes such as, for a watershed, for wildlife, for recreation, and for commercial purposes? YES______ NO______

IV. Protection of the Wilderness

In 1964 Congress passed the Wilderness Law. This law provides for Congressional action to include individual Federal areas in the National Wilderness Preservation System.

Do you favor the enactment of legislation to establish the many wilderness areas in National Forests, Parks, and Wildlife Refuges? YES______ NO______

Do you favor strong executive action to preserve the wilderness? YES______ NO______

V. Establishment of the Redwood National Park

In return for land included in the new Redwood National Park, timber companies demanded a trade-off of National Forest land for their holdings, threatening to set a dangerous precedent.

Did you support the establishment of a large, adequate park? YES______ NO______

Did you oppose the plan to give National Forest lands to the timber companies? YES______ NO______

VI. Pork Barrel Projects vs. the Preservation of the Environment

Congressmen often support projects to dam free flowing rivers with the promise of economic benefits for their congressional districts.

Have you ever sponsored reservoir projects in your district that would raise land values for the benefit of real estate companies? YES______ NO______

Are you opposed to damming such streams as:

the vital Clearwater in Idaho? YES______ NO______

the Big South Fork of the Cumberland in Tennessee which ranks among the most scenic? YES______ NO______

the Salmon in Idaho, the longest stream in the West still free of dams?
YES______ NO______

STUDENT COMMENT NO. 19 : Tactics to Influence Environmental Policy

Undiscouraged by defeat after defeat, the active promoter of environmental protection can battle through several levels of government and finally achieve his objective. This is the underlying message presented by James Redford in his essay, "Political Ecotactics in South Florida." President of the Mangrove Chapter of the Izaak Walton League of American and former president of the Florida Division of that organization, Redford won the American Motors Conservation Award for 1970. His essay outlines the procedures involved in the influencing the government to achieve a particular ecological goal, and offers several pieces of advice on the tactics to be used.

A critical part of Redford's strategy is to make the victory worth the battle. He points out that environmental activists may dilute their effectiveness before government agencies if they appear too often. He advises instead less frequent but fully-planned intervention on issues of major ecological importance. Due to the complexity of procedures to be followed, he suggests that action be designed to protect as broadly as possible, so that a long and hard-fought battle may yield more than an isolated ecological triumph. If you wish to preserve a rich section of bay bottom, for example, Redford urges you to consider fighting for the entire bay. Nevertheless, he concludes that any decision is better than no decision at all, and proceeds to outline a course of action for preserving the hypothetical bay bottom in question. Eight basic steps are involved:

1. Massive public reaction may be used effectively to sway government commissions or boards at public hearings, especially if you should learn that the issue has already been more or less decided (against your interests) before the hearing. However, the mass-reaction route undercuts its own effectiveness if overused.

2. Another tactic is lobbying directly with members of the board or commission, preferably before the meeting and, if possible, before their minds are made up. It is essential to be knowledgeable if such lobbying is to have much influence.

3. Scientists may be called to testify at a public hearing. It is the responsibility of the environmentalist organizer to arrange for scientists of various specialties to testify, to determine a logical order of presentation and to see that the testimony itself is as brief and unscientific as possible. Scientists who work for the state or federal government are often most effective because their testimony has some bearing on legal decisions. State biologists and biologists from the U. S. Fish and Wildlife Service must conduct surveys before a dredge permit can be granted. Biological reports from appropriate federal bureaus can hold up development for considerable lengths of time. Redford advises the environmentalist leader to summarize his case at the end of the scientific testimony before calling other pressure groups or voter groups to testify, in order to stand clear of any possible mis-statements or actions by people who are less informed.

4. If the public hearing fails, the next step is an appeal to the State Cabinet. The Randell Act requires that a biological report be submitted by the State Department of Natural Resources to the staff of the Internal Improvement Fund before a permit to dredge and fill may be granted by the Trustees (Cabinet). A hydrological report may also be required, opening up the possibility of another avenue for the environmentalist to follow. The staff of the Internal Improvement Fund offers its recommendations along with the biological report, but they do not control the Cabinet's decision. An informed lobbyist may also exert influence.

5. For that reason, correspondence from environmentalists around the state to the Cabinet is essential to reinforce the lobbyist's efforts with evidence of popular support.

6. Even if the State Cabinet votes to grant the dredging permit, other government channels remain

to the enterprising "ecotactician." He can now appeal to the federal level. The dredger must receive a permit from the U. S. Army Corps of Engineers and a biological survey from the U. S. Fish and Wildlife Service at Vero Beach. By writing to the Corps of Engineers in Jacksonville, the defender of the bay can find out when dredging is scheduled, and then reactivate his correspondents and demand another public hearing. It is also possible to pit the U. S. Fish and Wildlife Service against the Corps of Engineers and thus force the issue up through government channels all the way to Secretary of the Interior and the Secretary of the Army. Once the issue reaches the federal level, it is advisable to enlist the services of a Washington conservation from a national conservation society as a specialized lobbyist, and to contact Florida Congressmen. However, Redford cautions against excessive appeals to legislators, observing that since Congressmen tend to refrain from intervening in local controversies, it is wise to involve them only in major problems.

7. Assuming the decision again favors the dredgers, the environmentalist's next recourse lies in the courts. It is very helpful if the organization has a lawyer who is willing to donate his services. Even if the court decision protects the bay, the lawyer may still be needed--he may be able to use his specialized knowledge on the case to back up Justice Department lawyers if the dredger decides to sue the Army Corps of Engineers.

8. Since the above procedures are bound to take a long time, an election is likely to have occurred during the controversy. Candidates can often be persuaded to pick up an ecological drive such as the "save-the-bay" movement as a campaign issue. If elected, they may be able to exert influence on behalf of the environmental protection forces.

Redford maintains that all ecological cases can be fought on several levels of government. They must, in fact, be fought on all possible levels of government before being taken to court. This is known as "exhausting Administrative remedy."

The essay concludes with general advice to the ecotactical leader. Five main points are covered:

1. Do not expect to receive most of the credit for successes. Credit for possible success is the incentive for obtaining the support of political figures, which is essential. Even though his organizational talent is essential, the ecotactician must be primarily an invisible force.

2. Consider "flank attacks" as well as direct, or frontal assaults. It may be possible to achieve success in one environmental area by introducing other factors. (For example, Redford explains how the lack of sewage planning and the possibility of withdrawal of federal funds for treatment plants blocked a zoning application after an appeal concerning population density and damage to nature had been turned down.) In other words, there is more than one way to skin the cat.

3. Practice the "Law of Parsimony" (thrift). **Limit** proposed legislation to maximize chances of its being passed. An overabundance of demands may result in the acceptance of relatively minor measures and the failure of more substantial programs. This idea is related to the concept of making the victory worth the battle.

4. Be resourceful but maintain your integrity. To be more blunt, be "tricky" if necessary but never "dirty." Underhanded strategy might win one battle, but it could well lose the war because it limits the effectiveness of the ecotactician in future campaigns by undermining his position with politicians.

5. Despite your strong commitment, avoid creating feuds with opponents on one issue. It is quite possible that you might join forces on the next issue.

STUDENT COMMENT NO. 20 : Expressions of Public Opinions

Public opinion is of great importance to all governments, even to absolute dictatorships. People of all times and places have indicated that there are limits to the poor treatment which they will accept at the hands of their leaders. Then, if there is no improvement and they see no way out, they revolt. An individual's opinions are of crucial and continuing importance in a democracy because the democratic government functions with the consent of the people. The clearest and most direct way people in a democracy express their opinions and their consent, or lack of consent, is through elections. It is apparent that during election years governmental officials become acutely aware of and sensitive to the voters' interests and resist any measures that will increase taxes or impose other burdens. Voters are also given other means by which to express their opinions on special issues through referendums. Each vote can be interpreted as an expression of opinion, even though not all opinions are carefully thought out and other votes may be cast for reasons having little to do with the issues involved.

Voting is not the only way by which a citizen can effectively express his opinion to the government concerning its actions. However, these other techniques require more than going to a voting booth, and consequently fewer people utilize them. One effective technique is to contribute time, money, or both to organizations that work in behalf of ideas you agree with. Another is direct action: complaining to persons in authority when you disagree with their actions, writing letters of opinion to local newspapers when local problems are involved, notifying your governmental representatives concerning your views on issues of importance to you, speaking up at public hearings on proposed laws or public actions, circulating petitions, and organizing meetings. Perhaps the most dramatic types of expression of opinion in recent American history have grown out of the civil rights movement. Picketing, boycotts, "freedom marches," "freedom rides," "sit-ins," "swim-ins" and other mass demonstrations, first used by Negroes and whites to combat racial segregation, have been adopted by other activist groups in recent years.

Though the voice of the people is not always the expression of the final truth, public opinion is still a force that can never be disregarded. Thus, having opinions and putting them to work is an exciting enterprise. It is also a challenging area of citizenship. One of the responsibilities of citizenship is to decide what you think when confronted with controversial subjects.

TEACHER COMMENTS

TEACHER COMMENT NO. 1 : Small Group • Self-Evaluation

Instructions: Students are to list members of their group (with the exception of themselves) in the order of how valuable each was in accomplishing the group's goals. The ranking of members is collected and each group member's total score is determined by adding up the number he was ranked by each of his fellow group members. Each student's group rank is determined by listing them from the lowest total score to the highest total score. The member with the lowest total score is considered to be the most valuable.

Sample Form for Students
SMALL GROUP SELF-EVALUATION

Instructions: List group members in the order of how valuable each was in accomplishing the group's goals. Do not list your own name. For example if your group has six members, list five names in the order of their importance to your group's success. By each name indicate the grade you think each member deserves and make any comments about their work that you wish. This individual evaluation will remain confidential.

Rank Order of Members of the Group. (Names)	Letter Grade They Deserve	Comments
1.		
2.		
3.		
4.		
5.		

TEACHER COMMENT NO. 2 : Small Group • Flow of Contributions

Date____________________

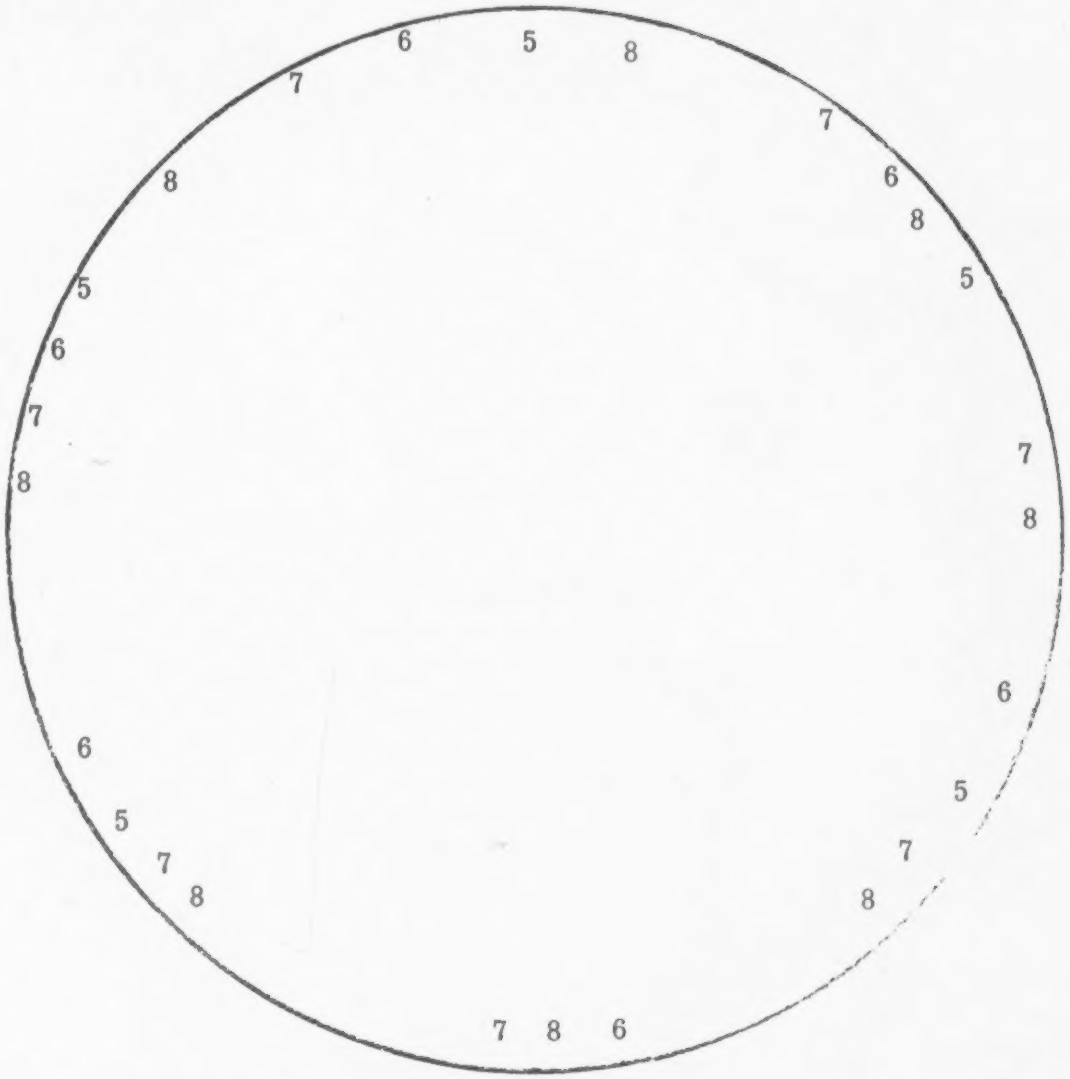
Time__________to__________

Problem___________________

Instructions:

Circle each number that corresponds to the number of participants in the group and write the name of each member on one of the numbers. Draw a straight line from the first person who makes a contribution to each succeeding contributor as long as the discussion proceeds.

Evaluator___________________



TEACHER COMMENT NO. 3 : Small Group • Pattern of Contributions

Date____________________

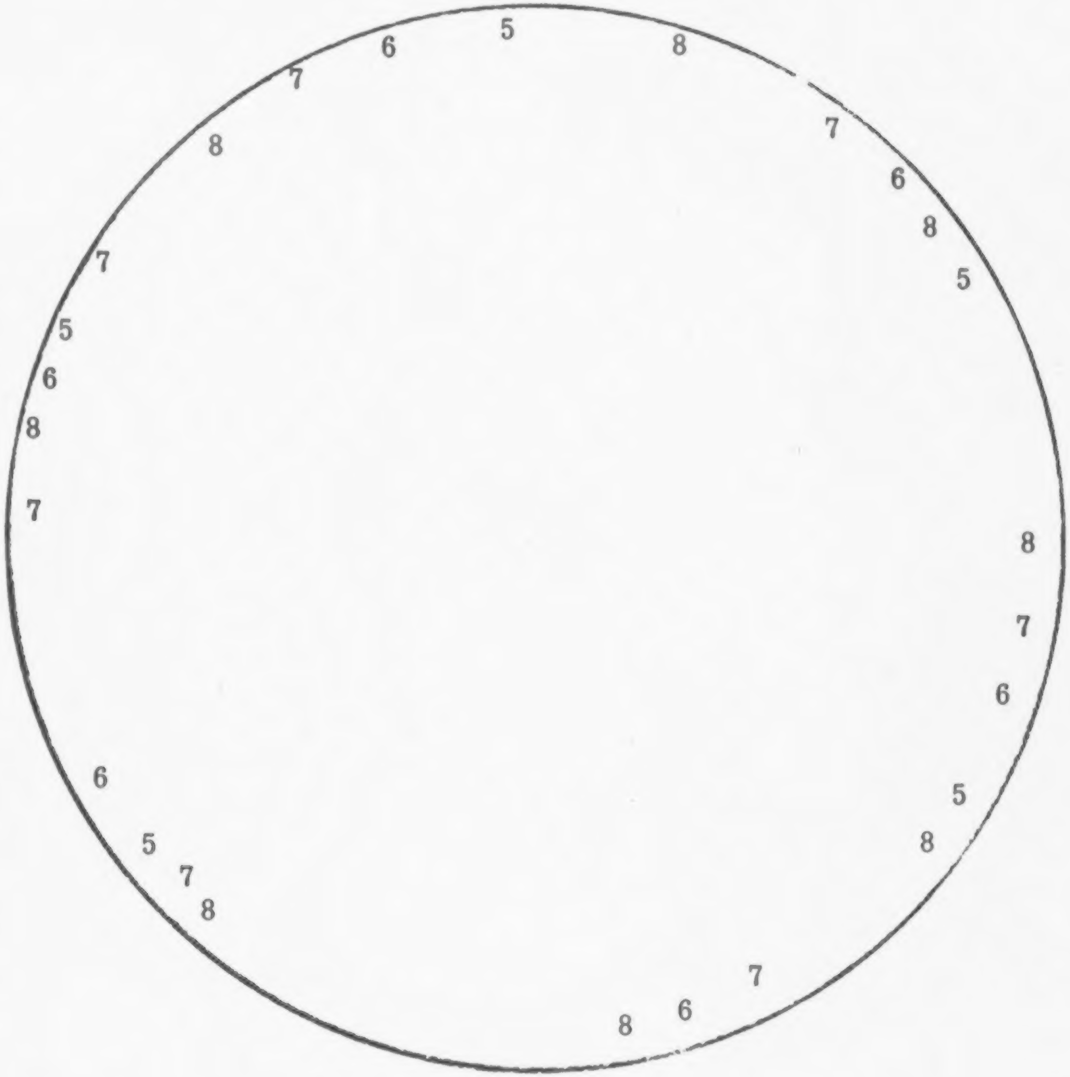
Time________to___________

Problem_________________

Instructions:

Circle each number that corresponds to the number of participants in the group and write the name of each member on one of the numbers. Draw an arrow (length of arrow in proportion to length of contribution) from the contributor toward the person to whom the contribution is directed. If the contribution is directed toward the entire group, direct the arrow toward the center of the circle.

Evaluator__________________



TEACHER COMMENT NO. 4 : Small Group • Individual Evaluation

Date__________ Time________ to________ Problem__________ Participation__________

Excellent Poor		Item
1 2 3 4 5	1.	Was well prepared for discussion
1 2 3 4 5	2.	Used prepared outline properly
1 2 3 4 5	3.	Kept running outline of discussion
1 2 3 4 5	4.	Contributed readily at every opportunity
1 2 3 4 5	5.	Contributions were presented at the proper time
1 2 3 4 5	6.	Contributions were brief
1 2 3 4 5	7.	Contributions were clearly stated
1 2 3 4 5	8.	Showed evidence of a firm grasp of discussion theory
1 2 3 4 5	9.	Used constructive reasoning rather than intentional reasoning
1 2 3 4 5	10.	Demonstrated objectivity
1 2 3 4 5	11.	Reasoned critically
1 2 3 4 5	12.	Showed open-mindedness
1 2 3 4 5	13.	Provided sources of facts and other bases for opinion readily
1 2 3 4 5	14.	Answered questions asked of him readily
1 2 3 4 5	15.	Listened well to contributions of others
1 2 3 4 5	16.	Demonstrated an attitude of cooperation rather than competition
1 2 3 4 5	17.	Talked clearly, distinctly and audibly
1 2 3 4 5	18.	Courteous and respectful of others (didn't interrupt, etc.)
1 2 3 4 5	19.	Encouraged others to contribute to the discussion
1 2 3 4 5	20.	Assisted in providing leadership services
		Total Evaluation
1 2 3 4 5		Rating of total performance in relation to other members of the group
		Group Evaluation
1 2 3 4 5		Rating of the whole group in relation to other group discussions witnessed.

Instructions: Circle the number for each item that tends to represent your opinion about the quality of participation demonstrated.

Evaluator________________

TEACHER COMMENT NO. 5 : International Debate of Man's Uses and Abuses of the Sea

The oceans: man's final terrestrial frontier. Oceans cover 70% of the earth's surface. The sea has provided man with a major means of transportation and livelihood. It is the most important determinant of the world's weather. It borders on more than 100 nations. Yet scientific knowledge of most of the seabed is less advanced than knowledge of the surface of the moon.

The growing population of the world makes it inevitable that man turn seaward for sustenance -- both for food and essential mineral resources. However, two major problems will confront man in his exploitation of earth's greatest resource: (1) how to organize and regulate development of what is essentially an international expanse, and (2) how to curb growing pollution of the sea which may endanger the very resources man will so desperately need in the century ahead. If the latter problem is not resolved, the former will become a moot question. The vastness of the sea has probably served to obscure the fact that it is finite, and that its capacity for absorbing the waste products of the world's expanding technologies is also finite. Factories sluice effluents into convenient rivers, which carry them to the sea. Municipalities discharge sewage, with varing degrees of treatment, into rivers, which eventually deposit them in the sea. Rains wash chemical pesticides, herbicides and fertilizers from agricultural lands into rivers and then on into the sea. There is no outlet for the sea. Any wastes which are not degradable merely accumulate in the waters of the ocean and on the deep seabed. The "buck" stops here.

Public attention was first riveted to the gradual degradation of the sea by a series of spectacular maritime disasters in the 1960's which cast hundreds of thousands of gallons of petroleum into the sea. On May 18, 1967, for example, the tanker "Torrey Canyon" ran aground at the west end of the English Channel and dumped 118,000 tons of crude oil into the sea. Within a month, French and British coastlines were strewn with millions of dead fish and seabirds. In 1969, a major blowout at Santa Barbara left an oil slick over some 800 square miles of the Pacific Ocean. During the 1969 exploration of the papyrus ship "Ra," explorer-author Thor Heyerdahl reported sighting huge globs of black oil far out at sea. At present, 10% of the shellfish producing waters bordering the United States have been declared unsafe due to pollution. (Filter-feeding creatures such as oysters bear the brunt of pollution in coastal areas since they absorb a disproportionately large amount of the effluents.) The threat to the ocean mounts as the world's technologies continue to grow. In addition to oil spills, industrial, municipal, and agricultural wastes, there is a mounting danger of thermal pollution from nuclear powered generating plants, of atmospheric fallout from gasoline vapors, and accumulation of low-level radioactive wastes from reactors, laboratories and hospitals. New chemical substances which may pollute the sea are being developed at a prodigious rate. The coastal concentration of the world's population increases the threat of such contamination of the oceans. The United States, with approximately 45% of its population clustered on the coasts, dumped an estimated 48 million tons of solid wastes into the sea in 1968 -- or about one-fifth of the world's aggregate coastal effluents. This figure was expected to increase seven-fold during the present decade. Supplying petroleum products for rapidly-growing industrial societies continues to present environmental hazards for the oceans. Tankers twice as large as the "Torrey Canyon" are under construction in Germany and Japan. In addition to the danger of colossal oil spills from these huge new conventional tankers, the potential use of nuclear powered tankers raises the possibility of a marine disaster which could cause radioactive contamination as well. The ecological danger of such oil carrying operations is not confined to outright pollution from spillage. Dredging channels and harbors to accommodate these massive vessels poses yet another threat to marine life, by disrupting ecological balances. This is a major fear of conservationists concerning the planned installation of a 48-inch pipeline to transport hot crude oil 800 miles across the Alaskan tundra from Arctic Coast wells to the seaport at Valdez -- that thermal transfer could destroy the delicate tundra ecology even if seepage or breakages could be avoided. The alternate possibility of transporting the Alaskan oil in huge tanker-ice-breakers, which was proven feasible by the 1969 voyage of the ice-breaker Manhattan through the Northwest Passage, also carries the threat of spillage and ecological distrubances. Another example of man's ecological impact upon the sea even where no direct pollution is involved was observed following the construction of the Aswan Dam in Egypt. The interruption in the annual deposition of rich nutrients in the eastern Mediterranean Sea resulted in a 90% plunge in the sardine yield. Finally, in his search for marine food resources, man has caused the near extinction of many species of sea creatures: notably certain species of whales and seals, sea turtles, Pacific sardines and Atlantic salmon.

The rapid increase in the world's population makes it imperative for man to tap the ocean for food, drugs, minerals and fuels. Yet he must do so with due regard for its preservation, or he will destroy his last major resource. In general, several factors contribute to the difficulty of this problem. One is the enduring effects of many forms of marine pollution. Lead from gas exhaust which enters the ocean today through atmospheric fallout will be circulating on the seabed centuries hence. Secondly, marine food chains often cause pollutants to ramify throughout the seas. This is particularly true in the case of DDT, which has been found in the organs of animals throughout the seas. Third, ocean pollution circulates. Trade winds disperse DDT thousands of miles from its original point of application. Ultimately it is dissolved into the sea. A fourth complicating factor is the dearth of scientific knowledge concerning the long-range effects of marine pollutants and the capacity of the sea to absorb and disperse them. An effective program of control must build on a firm foundation of scientific knowledge. Probably the greatest obstacle to protection of the sea, however, is the difficulty of providing for meaningful international co-operation. Marine pollution is ultimately an international problem and effective international programs will be essential if it is to be abated.

In the last decade, the United States has awakened to the need to protect the oceans. In 1966, after six years of debate, Congress finally passed the Marine Resources and Engineering Development Act, which established a National Council on Marine Resources and Engineering Developement in the Executive Office, under the chairmanship of the Vice President. It also directed the President to appoint a 15-member commission to conduct a comprehensive study of marine programs and recommend a plan and Federal organizational structure for a national ocean program. The result was the publication in January, 1969, of a 206-page report, "Our Nation and the Sea." Its most significant proposal was the establishment of an independent National Oceanic and Atmospheric Agency (NOAA) to coordinate marine programs which were scattered throughout 22 departments and agencies within the federal government. It also recommended an annual oceanography budget of $652 million for 1971-75, rising to $948 million from 1976-80. (The actual budget request for fiscal 1971 was $553.1 million.) In 1969, five Congressional committees held hearings on United States ocean programs and related international issues. These hearings revealed some opposition to the formation of the NOAA, due largely to the reluctance of some governmental departments to relinquish their ocean programs to the new agency. At these hearings, several prominent government officials admitted they had not read "Our Nation and the Sea." Despite such resistance, on July 9, 1970, President Nixon announced the establishment of NOAA within the Department of Commerce. Employing 12,000 people and operating initially on a budget of $270 million, the new agency assumed responsibility for several ocean programs which had previously come under the auspices of other governmental departments. "Establishment of the NOAA would 'make possible a consolidated program for achieving a more comprehensive understanding of oceanic and atmospheric phenomena,' Mr. Nixon said." * Nevertheless, a great deal of bureaucratic overlap still exists, as approximately 39 Congressional committees and subcommittees continue to hold various jurisdictions in the ocean field.

Even if the United States can integrate its governmental agencies into a unified campaign against ocean pollution, the only viable channel for a total assault on the problem is through the formation of an international body. The United Nations would appear to be the logical candidate. Ocean resources, ecology and legal-political issues are among the United Nation's most pressing environmental interests. In September, 1969, UNESCO's Inter-governmental Oceanographic Commission (IOC) completed a comprehensive outline for an expanded long-term program of oceanic exploration and research. The Food and Agricultural Organization (FAO) held a conference in December, 1970, to study marine pollution, and has also been active in promoting the utilization of the oceans as a food source. The United Nations International Maritime Consultative Organization is responsible for administering a 1954 agreement which prohibits discharge of oily wastes within 100 miles of shore and requires registration of all oil transfer operations, and also in developing better preventative measures against oil spillage. However the effectiveness of this agency has been vitiated by the lack of an effective means of international enforcement. In 1968 and 1969, the U. N. General Assembly adopted several resolutions which directed U.N. Committees to investigate cooperative measures against marine pollution and to consider a U.S. proposal for an International Decade of Ocean Exploration. The 1972 Stockholm conference on the Problems of the Human Environment will give substantial attention to the protection and use of the oceans, and international treaties may be considered. However, international-level efforts to preserve the sea have encountered much the same problems in coordination which plague the U.S. Federal government; some 22 U.N. agencies are involved in issues pertaining to the oceans. For the U.N., this problem is compounded by the lack of funds and expertise, and especially by the reluctance of member nations to yield sufficient authority to an international regulatory body. Two areas where political conflicts have been most heated are the exploitation of international fisheries and mineral resources embedded in the continental shelves.

Fish are the most valuable resource in the ocean. The total world harvest from the oceans is more than 50 million metric tons annually, resulting in an annual income of approximately $8 for the world's fishermen. Proper conservation of this resource will be essential to combat food shortages resulting from the world population explosion. At present, some species of fish have been overexploited to the verge of extinction, while others are underexploited. In addition, many species are threatened by marine pollution. At present, international fishery management consists of more than 20 regulatory or specialized intergovernmental organizations formed by bilateral or multilateral treaties or under the FAO. The regulatory authority of such commissions varies, but it is usually insufficient, and often limited to recommending conservation measures. The key problem impeding implementation of an authoritative international fishery management regime is the difficulty of establishing an equitable means of sharing the resources among many nations. One possibility would be a licensing process, but this raises the question of whether large and wealthy nations would exert undue influence upon the license auction. Another alternative would be to internationalize the world's fisheries and then grant concessions to fishing interests of various nations, using part of the economic yield to finance marine research, develop fish farming, police the seas and aid the participation of less developed nations. Another problem which would have to be resolved consists of the enormous variations among nations concerning offshore fishing rights. Claims of exclusive territorial jurisdiction vary from three to 200 miles. (The U.S. recognizes a 12-mile limit.) This problem has recently been vaulted into the international news spotlight with the seizure of numerous U.S. tuna boats by Latin American fishing nations. Loss of a substantial portion of income from offshore fisheries to an international sharing plan could be economically ruinous for coastal countries such as Peru and Chile. Obviously, serious problems in international relations will have to be surmounted before effective world-wide action to preserve and develop living marine resources can get underway.

The equally volatile issue of marine mineral resources revolves around two fundamental political questions: (1) How far out can a nation claim sole jurisdiction over the ocean floor and its non-living resources? (2) Beyond that point, how should exploration and exploitation of the seabed's resources be regulated? It is necessary first to arrive at an operational legal definition for the continental shelves, which vary considerably in width and depth. (The average width is 50 nautical miles, the mean depth 200 meters, or 656 feet.) Although the continental shelves constitute only 7.5% of the total area of the ocean, 90% of all current exploitation of the ocean's resources -- both living and non-living -- takes place within these areas. They have great growth potential, especially in the area of offshore oil production. Already accounting for 16% of the world's petroleum supply, offshore operations are expected to provide a third of the world's oil by 1980. Some 16,000 wells have already been drilled off the coasts of the United States, with 1,000 new marine rigs being constructed each year. Development of such facilities carries with it the risk of oil blowouts and interference with marine life, shipping and fishing. Control of such hazards is an intricate matter. Some have argued that the only effective regulatory instrument would be an international agency. But pending the formation of such an agency, some nations have opted for the "Canadian solution" -- or unilateral extension of national jurisdiction to control pollution hazards, a practice applied to the Arctic waters north of Canada in response to potential opening of a Northwest corridor by U.S. tankers equipped with ice-breaking equipment.

Concerning the management of offshore mineral resources, 102 nations - 98 of them coastal - have recognized the principle of a coastal state's rights to adjacent offshore mineral deposits. Forty, including the United States, the U.S.S.R. and other major powers, ratified the 1958 Geneva Convention on the Continental Shelf, which grants coastal nations exclusive jurisdiction over mineral resources on its continental shelf out to a depth of 200 meters or beyond, as far as exploitation permits, limited only by the ambiguous concept of "adjacency." The elasticity of the "exploitability" criterion seems to permit expanding national jurisdiction to accommodate technological advances. For example, the U S. oil industry is already drilling exploratory wells in waters as deep as 1,300 feet (396 meters). Within 10 years, technological improvements are expected to make possible drilling out to 6,000 feet. Eventually such expansion is bound to create international conflicts unless the criterion for exploitation is more precisely delimited.

The possibility of international political conflicts over the use of the seabeds is evident from U.N. debates which have already taken place. The basic conflict pits the large nations, which are at present best equipped to exploit the mineral resources of the sea, against smaller nations, which fear a "race to grab" by the big powers. In 1969, over the strong objections of the U.S. and other major powers, the small nations pushed through the General Assembly a resolution declaring a "moratorium" on all further exploitation of the deep seabed until an international regime could be set up. The 42-member Permanent U.N. Seabeds Committee on the Peaceful Uses of the Sea was instructed to study the development of principles to govern deep sea exploitation. It met three times in 1969. Participants agreed upon the need to determine a precise boundary for the continental shelf and to establish an international machinery for regulating exploitation beyond that line, with a percentage of the revenue to be earmarked for international organizations. President Nixon set forth his Administration's proposals for regulating the use of ocean resources on May 23, 1970. He called for expeditious adoption of an international treaty limiting national jurisdiction over the seabed to a depth of 200 meters and for an international regime to control development of deep seabed mineral resources. "The regime should also establish rules to prevent unreasonable interference with other uses of the ocean, to protect the ocean from pollution, to assure the integrity of the investment necessary for such exploitation and to provide for peaceful and compulsory settlement of disputes." ** The Administration planned to submit its proposal to the U.N. Seabeds Committee.

There are many problems to be solved before such a plan can be implemented, however. It will be difficult, for example, to reconcile the political interests of large and small nations. Greater scientific knowledge concerning the extent, distribution and nature of ocean resources will be necessary before legal and political problems can be pinpointed. There is also the problem of nations whose primary offshore interests rests not with non-living resources in the continental shelf but with fishery resources; they are likely to demand recognition of extensive fishing rights before agreeing to the precise definition of the continental shelf which would be an essential integument of any international program governing the development of marine resources. Administrative machinery for regulating exploitation and protecting marine resources must be devised. In particular, the relationship between national and international authority must be defined. Sufficient power must be vested in the international agency if effective control is to be achieved; this will require the relinquishing of a degree of jealously-guarded national sovereignties. Finally, there is a basic conflict between promoting exploitation of needed resources and assuring necessary environmental safeguards. The ability of the nations of the world to unite and develop a balanced formula for the use and conservation of the resources of the sea will determine the ecological future of the earth.

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*Congressional Quarterly, Man's Control of the Environment, (Washington, D.C.: 1970),p.78.

**Congressional Quarterly, op. cit., p.80.

TEACHER COMMENT NO. 6 : Evaluation Form For Oral Report
(To be filled in by students and/or teacher)

Subject of Report____________________ Student reporting______________________________

I. Knowledge of subject matter and/or what way questions were answered.

_____a. Excellent (5 points)	_____b. Good (4 points)	_____c. Fair (3 points)
_____d. Poor (1 point)		Points Earned________________

II. Presentation of material by using audio/visual aids. Evaluate each aid used from 0--5 points.

_____a. Charts	_____b. Maps	_____c. Graphs
_____d. Guest Speaker	_____e. Slides	_____f. Films
_____g. Filmstrips	_____h. Table Display	_____i. Study Guides
_____j. Puzzles/Games	_____k. Skits	_____l. Other
		Points Earned________________

III. Equipment used in presentation. Evaluate each aid used from 0--5 points.

_____a. Opaque Projector	_____b. Filmstrip Projector	_____c. Overhead Projector
_____d. Film Projector	_____e. Globe	_____f. Chalkboard
		Points Earned________________

IV. Speaker's attitude towards listeners, tone, and quality of voice should be considered. Evaluate as #1.

_____a. Excellent	_____b. Good	_____c. Fair
_____d. Poor		Points Earned________________

V. Evaluation of the participation of the members of the groups. (Use where applicable)

_____a. Excellent	_____b. Good	_____c. Fair
_____d. Poor		Points Earned________________
		Total Points________________

TEACHER COMMENT NO. 7 : Participation Evaluation

The following checklist is offered as an example of a device which may be used to lend a degree of objectivity to evaluating student participation in class discussions. The teacher may involve students in the evaluative process by devising a rotation system whereby two or three students would evaluate class members during class discussion periods.

Only four simple catagories are employed in this checklist. More complex scaling may be included if the teacher wishes to discriminate among cognitive skills of the students, (i. e. recall, synthesis, analysis, etc.). However, this type of scale is not easily employed. The following catagories for evaluation are included in this suggested checklist:

1. Quantity of student contribution.
2. Content of student's remarks as these indicate knowledge of topic, critical and/or innovative thinking by student.
3. Relevance of student's remarks to subject under consideration.
4. Clarity of expression and presentation by student.

   The evaluator may indicate quantity of student's remarks by simply placing a check in the appropriate column. The other categories should be rated on the following qualitative scale of 1-4.

   1 - Poor (incorrect and/or inappropriate)
   2 - Fair
   3 - Good
   4 - Excellent (complete and appropriate)

The following chart may be adapted for use in the evaluation described above. Simply record student's name when he initially participates and continue evaluation of any of his subsequent comments on same line. There is no need to record the student's name until the point of initial contribution.

NAME	QUANTITY	CONTENT	RELEVANCE	CLARITY
1. Sam Sunshine		3, 1, 2	4, 1, 3	3, 3, 3
2.				
3.				

TEACHER COMMENT NO. 8 : Evaluation Form for Visuals

There are four major areas of importance indicated on this form. Teachers who grade on a percentage basis should insert a value in each blank to determine the weight of each area in relation to the others, making the sum of all blanks on a perfect item total 100. Teachers using other systems (such as variable points) should determine the proper value of each area. Note: part 4 clarity, has four sub-areas which combine to make the total value for part 4. This form is intended as a suggested guide for teachers and/or students to evaluate visual presentations produced by students.

Student's Name______________________________ Title or Topic______________________________

VALUE AREA OF EVALUATION

1. APPROPRIATENESS

_______ If the student has had an opportunity to select either the topic or method of his presentation, is the choice of either or both appropriate to the assignment?

2. ACCURACY

_______ Are the facts used in the presentation accurate? If not, where is the inaccuracy?

3. COMPLETENESS

_______ Does the presentation represent a complete statement or coverage of the subject (Is there material or facts omitted which makes the presentation misleading)? If not, where is the presentation lacking?

4. CLARITY

Is the presentation clear to the viewer?

_______a. Is the viewer readily able to determine the point or message contained in the presentation?

_______b. Is the presentation free from unnecessary distractions? (pictures, drawings, etc. which do not contribute to the purpose?

_______c. Are the colors and sizes of lines, bars, and/or pictures suitable?

_______ _______d. In the case of a collage or drawing, is the focal point clearly determined?

_______ COMMENTS:____

(Total Score)

TEACHER COMMENT NO. 9 : Conflict in Redwood Country

(The complete simulation game entitled, "The Redwood Controversy" from which the following excerpt are taken, is available from Houghton Mifflin Company. Contact your local salesman or regional sales office for further information.)

Introduction To The Original Controversy

The Redwood National Park controversy began when President Johnson asked the 90th Congress to protect the California coastal redwoods, largely owned by lumber companies, by establishing a Redwood National Park. A nationwide dispute erupted. A careful survey of the history of the dispute, which raged in the mid 1960's, shows that both conservationists and lumbermen were guilty of intemperate and distorted statements. Legislators, as always, were subject to conflicting pressures. Finally, within the federal bureaucracy itself there were signs of a struggle, as different agencies tried to build or maintain their separate domains in northern California. The real issue of whether a Redwood National Park was in the public interest was often submerged in a mass of conflicting claims, and seemed of secondary importance to many of the participants in the dispute.

I. The Plot

The United States Senate is about to consider setting up a Redwood National Park. Conservationists have tried to put such a bill in front of the Senate for almost 70 years.

All over the United States, people are watching this Senate meeting. Many newspapers support the proposed park. Lumber companies and people who work in the redwood country strongly oppose any park. Whatever decision is made, there will be many unhappy people. It is the responsibility of each Senator to carefully consider all of the data and opinions. He should listen to all of the witnesses. Then he must vote for one of the following proposals.

Proposal No. 1

Establish a small national park by taking over two state parks plus 5,760 acres of private land. Estimated cost to the U.S. government to purchase the private land is 6 million dollars.

Proposal No. 2

Establish a medium-size national park by taking over three state parks plus 18,900 acres of private land. Estimated cost to the U.S. government to purchase the private land is 20 million dollars.

Proposal No. 3

Establish a large national park by taking over three state parks plus 71,000 acres of private forest. Estimated cost to purchase land is 75 million dollars. Or, establish no park at this time.

II. Roles

Players will be given the roles of Senators and witnesses. Each witness is an important citizen with a special point of view on the park proposals. Each of the Senators gets a different role that shows his personality and how his supporters feel about the park issue.

III. Rules

1. The Senate Leader calls the hearing to order. He tells each witness when to testify. A witness has five minutes to make his presentation. Senators may then ask questions.
2. After all witnesses have spoken, the Senate Leader asks each Senator to identify himself and state how he thinks he will vote. These preferences are recorded by the Leader on the Master Vot Sheet. (In real life, a Senate committee hears witnesses and reports to the rest of the Senate. The entire Senate then debates the issues and votes. For this game the two steps have been combined.)
3. Next, the Leader declares a 15 minute recess for discussion. Now, one Senator can try to get another Senator to change his vote.
4. Next, the Leader calls the roll, and each Senator casts his vote. These votes are also recorded

on the Master Voting Sheet. The proposal which receives two-thirds of the votes wins. If no proposal receives enough votes, another discussion session is called. Go on with discussions and voting until one proposal wins.

5. The class discusses what factors were crucial in settling "The Redwood Controversy".

IV. Teacher Suggestions for Organization and Playing of the Game.

You can either deliberately assign the roles or distribute them randomly. Asking for volunteers may promote student participation. Consider assigning key roles such as the Senate Leader and witnesses to relatively unsuccessful students who need encouragement and success.

The game requires 15 Senators, one of whom you shall appoint Senate Leader, and six witnesses. If there are less than 21 students in the class, omit some Senator's roles. If more than 21, have students double up on some Senator roles. It is important to keep the ratio of park supporters and opponents the same.

If possible, arrange the classroom furniture to look like a Senate hearing room. The Senators, with their name plates on their desks, should sit in a semi-circle. The Senate Leader should be in the center. The witnesses should have desks facing Senators.

The first witness should be one who will set out the broadest outlines of the proposals.

Be as unobtrusive as possible. Answer or entertain questions from the players but avoid any active participation. Some questions, especially those concerning rules, should be answered directly to facilitate play.

This session will be characterized by spirited discussions. Exercise minimum restraints; communication should take precedence over discipline.

In reality a simple majority is needed to pass a bill. The two-thirds rule here promotes debate.

The post-game discussion should focus on ways students can use their game experiences to understand current events and to guide their future behavior as responsible concerned citizens. You may want to ask some of the following questions to get the discussion started:

1. What factors seemed to influence the Senate the most?
2. Which witnesses presentations affected you the most? Why?
3. Did you convince another Senator to change his vote? How?
4. What factors should be considered before the government takes private land?
5. Do you think it was luck that the proposal won, or did it win because it was the best decision?

TEACHER COMMENT NO. 10 : World Game

Specifically, "World Game" was intended to be a refutation of John Van Neuman's war game theory, which holds that one side or the other must die either by destruction or starvation.

World Game is a scientific means for discovering the expeditious ways of employing the world's resources so efficiently as to be able to provide a higher standard of living for all of humanity, enabling all of humanity to enjoy the whole of planet Earth without any individual profiting at the expense of another.

Example: U.S. Petroleum refiners spew forth SULFUR from their smokestacks, we can make SULFURIC ACID (a basic component of batteries). There is no excess market of SULFURIC ACID in the U.S., but manufacturers in Ceylon need SULFURIC ACID.

TEACHER COMMENT NO. 11 : Public Pressure

There always have been conservationists in Congress, and they often have been at least moderately effective in protecting environmental concerns. Congress regularly makes additions to the nation's park lands and wilderness areas. Antipollution laws have been on the books for a number of years, and language aimed at protecting the public's safety and interest is generally included in bills affection natural resources.

But in the 91st Congress, issues such as air and water pollution, waste removal and preservation of natural resources were in prominent view. Shortly after the first session opened in January 1969, an oil well in the Santa Barbara, California, channel sprang a leak and "radicalized" a lot of the public on the pollution issue.

Constituent pressure has been instrumental in getting strong bills through Congress. Several observers noted that the Water Quality Improvement Act of 1970 - which contains stringent provisions for cleaning up oil spills - is as strong a piece of pollution legislation as ever written. A newly formed Conservation Coalition, headed by the Wilderness Society, lobbied successfully in February to kill a bill which would have permitted increased timber cuts in Federally owned forests.

Several years ago, Senator Gaylord Nelson (D.Wisconsin) introduced a bill to ban DDT; it went nowhere. In 1969, he offered an amendment to the water pollution bill (S 7) to study limitations on the controversial pesticide and immediately got 30 co-sponsors; the Senate passed the amendment by voice vote.

To a certain extent, members were rushing to get on the bandwagon. 1970 is an election year, and public concern over the fate of the environment has never been higher. But evidence indicated that much of the new concern in Congress is sincere - and may continue after the current frenzy of activity slows down.

The environmentalists in Congress cut across the lines of most traditional alliances - party affiliation, conservatives and liberals, regional interests. "We're taking votes that we would not have taken one, two, five years ago," said an aide to a conservation-minded Senator. He cited the public works appropriations bill at a time when Congress insisted on giving the Administration $600 million more than it wanted for sewage treatment plants.

Another aide, this one from the opposite party, held the same view. For the first time, the votes for strong bills are there, he said. Like most issues where the public good appears in conflict with private interests, legislation emerges from a series of compromises. The Congressional environmentalists have enough votes behind them to bargain for better compromises, he said. Possibly now "the tide has changed sufficiently" so they won't have to compromise at all.

TEACHER COMMENT NO. 12 : Public Opinion and Interest Groups

It is generally agreed that the essential factor in any attempt to clean up air and water is public opinion or the attitudes held by the general public. In fact, the final decision on what is feasible in any society is circumscribed by the collective societal beliefs and attitudes.

In a democracy, the voting public may be the actual decision makers in such situations as referenda on local or state bond issues for the construction of waste treatment plants and other water pollution control facilities. Public opinion will continue to be important in weighing the costs and benefits of pollution control.

Another area where public opinion is at work is in helping to evaluate the aesthetic and recreational value of pollution control.

Public awareness of problems with air and water pollution has been rising. Studies conducted by the Opinion Research Corporation (ORC) show concern about water pollution has risen from 13 percent in 1965 to 27 percent in 1968. Concern about air pollution rose from 10 percent in 1965 to 25 percent in 1968. In several studies, pollution was considered one of the half dozen most serious community problems. Some studies have shown a high correlation between the level of air pollution and the concern expressed in the problem. There is no indication that this correlation exists between the level of water pollution and concern for the problem, probably because water pollution is not always as evident to the total population of a community as air pollution.

Concern about both water and air pollution increases as one moves up the socio-economic scale. Awareness of the pollution problems depends heavily on exposure to information on the subject; and many studies show that higher income families are exposed to more information sources.

If public concern regarding air pollution leads to control of the more obvious forms of pollution such as smoke and odor but leaves untouched those most damaging to health as sulfur oxides and carbon monoxide, public opinion will be increasingly hard to arouse and will depend on information sources.

Awareness of water pollution is probably more directly related to various forms of recreation - swimming, boating, fishing, and sight-seeing. It seems unlikely that pollution has increased at the same rate that public concern has increased. More likely, the amount of publicity given to pollution by all levels of government and by large private organizations has led to increased public concern.

There is also a pyschological factor involved in the politics of pollution. America has been deeply split on many political issues recently. The problem of pollution allows the public to unite against an impersonal villain "technology" in much the same way that pioneers were united against nature.

Public concern may let the boundaries for governmental action but concern must lead to some type of action before anything is accomplished. The problem must be seen as one on which the government can act; the individual must have knowledge of what he can do; and then he must be willing to expend the time and energy necessary to do it. Studies show that there are many times more people who express concern about the environment than there are who take any type of action - even a simple letter to their congressman.

Sometimes this is because people do not know how pollution can be controlled and they fail to think of it as an area of governmental activity until someone suggests it to them. Recently anti-pollution groups have been made up primarily of upper and upper-middle class individuals.

Basic in the political process of a democracy is the idea of translating individual desires into group demands. Individuals influence governmental policies by forming groups for action. The major types of pressure groups involved in the politics of pollution are: conservation groups such as the National Wildlife Federation and the Audubon Society; groups representing various levels of government such as the Governors Conferences; and groups representing the industries.

Important pressure groups and areas where they have made their influence felt are as follows:

The Izaak Walton League is one of the most active conservation groups in lobbying and has been most effective in influencing state regulations and enforcement in the Midwest. Like many conservation groups, their main interest has been water pollution and pesticides.

The National Wildlife Federation with an estimated 2,500,000 supporters is the largest group. It put out several publications with wide distribution and testifies often before Congressional Committees and at public hearings.

The Conservation Foundation undertakes research and educational projects financed by grants and public contributions, and publishes a highly respected monthly newsletter on pollution matters.

These groups have been supported by many groups with much narrower interests such as: Outboard Boating Club of America; the Federation of Fly Fishermem, and local sportmen's clubs.

Since 1956 the League of Women Voters has had water resources as their main interest for study and action. It undertook a "Know Your River Basin" survey; spearheaded a "Citizens Crusade for Clean Water" and testified before Congressional Committees.

The second type of organizations active in this area are political; such as the U.S. Conference of Mayors, the National League of Cities, and the National Association of Counties. In many instances their main impact has been in the area of air pollution. Realizing the enormous amount of funds necessary to curb pollution they have worked together to get the Federal government to commit more funds for pollution projects.

Cities sometimes conflict with state organizations; like the Association of State and Territorial Health Officers and the Conference of State Sanitary Engineers. These organizations have a vested interest in the expansion of pollution controls but are jealous of any tendency of the Federal government to take over any of the states' responsibilities especially in the area of enforcement.

Health groups such as the American Medical Association and the National Tuberculosis Association have become involved - as have scientific organizations as The American Academy for the Advancement of Science.

These groups were in existence before pollution became the matter of concern that it is today. Other organizations sprang into being in response to the challenge of pollution control. Examples of this are The Water Pollution Control Federation, the Air Pollution Control Association, and numerous local groups such as Citizens for Clean Air in New York City.

No industry has openly declared itself opposed to pollution control. However, pollution control devices add to the cost of production without increasing the value of the product. Since industries are in business to make a profit, pollution control is bad business. Countervailing forces to the profit system are the forces of law and public opinion.

To be effective, all laws need a high percentage of voluntary compliance. Whether or not industries will voluntarily comply will depend on the effectiveness of the regulating agency and whether the regulations are enforced equitably.

Other considerations which influence industries are (1) the cost of abatement, (2) sensitivity to public opinion and (3) the political influence of the industry. If the cost of abatement is so high as to entail bankruptcy, no amount of public opinion will induce them to change. In 1967 industry invested approximately $1.1 billion in pollution control equipment and expected to invest $1.5 billion in 1968. This was about evenly divided between air and water pollution control. If these figures are correct, industry would seem to be spending the amount necessary to solve water pollution problems but not to solve air pollution problems.

Industry has lobbied for governmental subsidies to offset these costs. It has been successful at the local level but has met only limited success at the Federal level. In general the influence of industries is greater at the local level because they are more important to the local economy; the state and local governments are less sophisticated and have fewer resources. This carries over to Washington where lobbyists for industry can usually do better talking to Congressmen than by going to the Executive Branch. In a way the many different interest groups without any one group dominating has left the Executive Branch free in dealing with pollution problems.

TEACHER COMMENT NO. 13 : Excerpts from An Environmental Newsletter

LEGISLATIVE WRAP-UP - At the beginning of the 1972 legislative session, Florida conservationists had high hopes for environmental progress, because of the several excellent bills which had been introduced. These hopes were quickly dashed, however, when, early in the session, environmental bills became ensnared in committee, crippling amendments were being proposed and legislators were being pursued and wooed by the largest gang of anti-environmental lobbyists ever to infest the halls of Tallahassee. The developers, real estate dealers and industries were out in force to scuttle any legislation that even implied environmental protection. All the signs portended an environmental disaster in Tallahassee. But from this bleak beginning, the 1972 State Legislature wound up its session on 7 April with some truly outstanding accomplishments in environmental legislation, which may even surpass in importance the work of the justly praised 1970 Legislature. It was a cliff-hanging tour de force with some of the most important bills being passed at virtually the eleventh hour. The following are brief descriptions of some of the more significant environmental and conservation bills passed this session, for which I have drawn information from Martin Northrup's Conservation Digest and the Tallahassee Report prepared by C-70s and published by Bill Partinton's Environmental Information Center.

ENVIRONMENTAL LAND AND WATER MANAGEMENT ACT OF 1972 (SB 629) authorizes the State planning agency to establish use standards for environmentally-sensitive "areas of critical concern" and developments of regional impact, such as power plants, highways, etc. For this new law to achieve maximum effectiveness, it is urgent that Florida voters approve a referendum in November which will permit the State to pledge a $240 million bond issue, the money from which will be used to purchase aquatic and wilderness areas, water storage areas and other environmentally-endangered lands. I believe most Floridians will support this bond authorization but it is not too soon to start passing the word to your friends and associates.

WATER RESOURCES MANAGEMENT ACT (HB 4060) - This is the law that was prepared by the Select Committee chaired by our own Representative Jack Shreve. At long last Florida's hodge-podge of crazy-quilt water management, flood control and drainage laws have been supplanted by 5 regional water management districts, of which the St. Johns River Basin is one. This may well turn out to be the most far-reaching and significant environmental law passed this session. Every member of IRAS should send a congratulatory letter to Jack Shreve for his outstanding accomplishment in preparing this bill and guiding it through the legislative labyrinth.

A REVISION OF THE STATE POLLUTION ENFORCEMENT LAW authorizes the Department of Pollution Control to go directly to court in a pollution case, rather than going through a long, drawn-out administrative procedure.

WILDLIFE SANCTUARIES (SB 187) - Authorizes the Game and Fresh Water Fish Commission, with the Governor's approval, to acquire by purchase or grant wildlife sanctuary easements on lands and waters for the protection of wildlife habitat.

Unquestionably, these are all fine and much needed laws, but no law can be useful or effective unless it is properly applied and enforced. A case in point is the Federal Refuse Act of 1899, one of the finest water pollution control laws on the Federal books. But for over seventy years the Corps of Engineers and the Justice Department ignored it and declined to prosecute water polluters. Only in the past year, after outraged public outcries, did the President direct the Corps and Justice Department to dust off this powerful act and start clobbering the polluters.

Therefore, the citizens of Florida must remain alert and insist that the appropriate State officials follow-up the work of the Legislature and carry forth their responsibilities to apply and enforce these new environmental laws. In this regard it is encouraging to know that we have a public servant the caliber of Attorney General Bob Shevin serving as the "peoples' lawyer" in Tallahassee. He doesn't pussy-foot with polluters or pork barrelers. .....from THE LIMPKIN, newsletter of the Indian River Audubon Society

TEACHER COMMENT NO. 14 : Environmental Lawsuits Against the Government

Can an individual sue the government in order to protect the environment? Two recent cases in Florida indicate that he can not only sue, but WIN -- provided that the attorney for the plaintiff is well versed in natural science as well as law. The first case involved a citizen-organized resistance to the excavation of a Cross-Florida Barge Canal by the Army Corps of Engineers. The second opposed the construction of a large jetport just north of Everglades National Park. Both suits have achieved their objectives, at least temporarily. In both cases, the key to the success of the lawsuit appeared to be a well-researched presentation of potential environmental hazards posed by the construction which was planned.

A traditional "enemy" of conservation groups, the Army Corps of Engineers is assigned various environmental control tasks such as building levees and installing drainage systems. It has performed much useful service in these areas, particularly with flood control, but the Corps has also gained a reputation for proceeding with projects regardless of negative environmental consequences. In south Florida, for example, a Corps drainage project north of Everglades National Park appears to have endangered the ecological balance of the region. Supported by the National Geographic Society, ecologist Frank C. Craighead, Sr. has conducted an extensive study of the ecology of south Florida. According to Craighead, before man developed the Metropolitan Miami area (Dade County), southern Florida represented a remarkably balanced complex ecosystem. The sawgrass swamps of the Everglades collected rain water and filtered it slowly back toward the sea, supporting a great variety of plant and animal life (including the now nearly extinct Everglades kite and the wood stork). Craighead claimed that the possibility of exposing rich farmland under the swamps blinded man to the ecological dangers of draining the area. The Army Corps of Engineers constructed levees, canals and reservoirs in order to divert water from developed areas, and then attempted to regulate artifically the flow of water into the Everglades. As a result, the natural system of filtration was disrupted, and water which had seeped gradually toward the sea under natural control began to surge seaward through canals, carrying with it tons of organic ooze which clogged coastal bays and endangered the fishing industry. During the heavy rains of 1968-70, the engineers systematically fed water into Everglades National Park which greatly exceeded the capacities of the natural filtration system in the swamps. The result was a raised water level in the marsh which destroyed much vegetation and wildlife. Ironically, in 1971 a backlash to flood-control measures instituted by the Corps during the wet period worsened the effects of a natural drought. The Glades were suddenly converted from a virtual inland sea to a parched expanse of highly combustible timber and grasses. Fires raged uncontrolled across more than half a million acres. Smoke was visible from Interstate 95. "Such destruction will happen again and again," Dr. Craighead warned, "unless we can restore the marvelously balanced ecosystem of 70 years ago. We must learn to view each project not as just an engineering problem, but as a matter of ecology as well."*

The lesson Dr. Craighead referred to was translated into action in 1970-71 when a group of conservationists in north-central Florida successfully halted construction of the controversial Cross-Florida Barge, Canal, another Corps of Engineers project. The idea for the 107 mile artificial waterway was conceived in 1942 to meet needs for military and commercial transport of goods from the Atlantic seaboard into the Gulf of Mexico. It was designed to cut a path 150 feet wide and 12 feet deep from Palatka on the St. Johns River, down the Oklawaha River and on across the peninsula to the Gulf near Yankeetown. At the time the project enjoyed almost unanimous support -- from shipping interests, land-owners, manufacturers, Florida's congressional delegation, the governor, the state legislature and the President. Construction began in 1964 and continued throughout the 1960's. By 1971, approximately $50 million in public tax funds had been spent, and almost one-third of the projected waterway had been completed. Excavation had reached the Oklawaha River, one of the prinicipal rivers of Florida.

While there had been some opposition to the canal from the start, it was not until a Gainesville conservation group known as Florida Defenders of the Environment entered the picture that significant headway was made. The group, which included scientists from state colleges and universities, began to organize public resistance to the canal. It claimed that the danger to the environment was greater than potential economic gains, observing that revenue is derived from tourism based on the scenic beauty and abundant fish and game in the area as well as from shipping and industry. Public opposition to the canal did increase. However, the battle was won not primarily with public relations, but in court. The turning point came when the FDE contacted a New York organization of attorneys called the Environmental Defense Fund, Inc. Filing a "class action" on behalf of the Florida Defenders of the Environment, a large group of petitioners who had used the Oklawaha River Valley and all persons wishing to preserve the area in its natural state, the EDF filed suit against the Corps of Engineers to stop the canal construction.

The initial reaction of the Corps was disbelief. It claimed "governmental immunity" -- a traditional belief that a citizen cannot bring suit against a government agency. Construction continued. Refusing to yield before this assertion, the EDF drew up a comprehensive legal action against the Corps, accusing it of violating three constitutional amendments and 12 different acts of Congress.

The argument revealed a great familiarity with the ecology of the region. The Oklawaha, it declared, is one of the principal rivers of Florida. Originating in several large lakes in the central peninsula, this navigable waterway flows northward for 60 miles and enters the St. Johns River eight miles below Lake George. Water from Silver Springs, one of the largest fresh-water springs in the world, joins the Oklawaha through Silver Springs Run. The Oklawaha River Valley is one of the finest unspoiled hardwood forests in the state. Several species of deciduous trees, well adapted to periodic flooding, cover the valley floor, including the magnificent bald cypress. Other hardwood species flourish along higher ground on both sides of the river. The forests provide an ideal habitat for many species of wildlife, including wood ducks, herons, snakes, turtles, alligators, deer, wild turkey, raccoon, otter, bobcat, black bear and panther. The report also found the forest to be an essential wintering ground on the migratory routes of many North American bird species. In addition, the river abounds with fresh-water fish such as channel catfish, chain pickerel, sunfish, speckled perch, striped bass and its famous largemouth black bass. Moreover, the project area of the St. Johns River includes extremely valuable fresh water fisheries for largemouth bass and anadromous shad. All this, the EDF maintained, would be endangered by the completion of the Cross-Florida Barge Canal.

The number of well-researched charges against the engineers rendered an effective defense almost impossible. The EDF suit charged the Corps with violation of the fifth, ninth and 14th amendments to the United States Constitution; the National Environmental Policy Act of 1969; the Environmental Quality Improvement Act of 1970; the Federal Water Pollution Control Act, as amended by the Water Quality Improvement Act of 1970; the Refuse Act; the Fish and Wildlife Coordination Act; the Migratory Bird Act; two acts which compel the Corps to exercise due regard for wildlife conservation and maximize conservational and recreational values of areas involved in their projects, and four acts pertaining to the protection and development of fresh-water fish.

The suit was systematic and devastatingly logical. First the EDF proceeded to outline the provisions of the National Environmental Policy Act and the Environmental Quality Improvement Act, asserting that the Corps of Engineers did not give adequate consideration to environmental factors as specified in these two acts. Secondly, it presented an exhaustive biochemical analysis of conditions at two artificial ponds created by canal construction at the end of the Oklawaha River which found the government to be in violation of different state and federal statutes. The engineers were using a toxic chemical known as 2,4-D (2,4-dichlorophenoxyacetic acid) to control the growth of water hyacinths on Rodman Pool. Not only was the use of the chemical itself a violation of Federal water quality standards established by the Florida Air and Water Pollution Control Commission, but the decomposition of the affected plants was found by the EDF to have caused the dissolved oxygen level of the water to fall below the accepted level set by the same agency. Third, the EDF outlined the various species of plant and animal life which would be threatened by the continued construction of the canal, and then applied these findings to several Congressional acts calling for protection of these very same species. In each instance, the Corps was shown clearly to be in violation of existing laws. In effect, the Environmental Defense Fund lawyers had trapped one arm of the government with the provisions of another government agency. They even went so far as to study the actual dimensions of the canal and turn them against its builders. They claimed that the shallowness of the canal would cause frequent groundings of barges and other vessels which would lead to oil spillage. They argued that such environmental damage could not be considered "a substantially unavoidable accident" (as is sometimes held in such instances), due to the intentionally shallow construction.

In conclusion, the EDF pleaded for the court to stop construction of the canal immediately, force the Corps to cease chemical spraying of water hyacinths in Rodman Pool and substitute mechanical or manual means of removal; drain the pool immediately, allow the area to return to its natural state, and forbid future construction which failed to comply with all statutes stated above. The latter requirement would render the completion of the canal virtually impossible.

Clearly outmaneuvered in court, the Corps of Engineers rested its case largely on governmental immunity to lawsuits by private citizens. It received quite a jolt, therefore, when U.S. District Court Judge Barrington D. Parker rendered a decision calling for an immediate stop to canal construction due to possible irreparable damage to the swamps and river. The judge went on to criticize Congress for arguing, on the one hand, for the need to preserve our environment while approving projects which were causing serious damage to the environment. Four days later President Nixon ordered a halt to construction. He stated, "The step I have taken today will prevent a past mistake from causing permanent damage." **

The key factors in the Environmental Defense Fund victory in the Cross-Florida Barge Canal case were a thorough knowledge and systematic application of existing laws protecting the environment and a painstaking study of the exact nature of the environmental hazard involved. The combination of the two produced a case so "airtight" as to overcome traditional government immunity to lawsuits from private citizens.

A similar combination of law and science provided the impetus for a lawsuit which has prevented -- for the time being, at least -- the construction of a large jetport north of Everglades National Park. The state of Florida was considering a "Big Cypress Swamp Jet Port" which would have jeopardized the existence of much of the plant and animal life in the park. The intervening force this time was not an entire conservation group but, essentially, a single person -- Victor John Yannacone, Jr., a New York lawyer renowned as a defender of the environment. Yannacone filed a class action lawsuit on behalf of all those entitled to the full benefit, use, and enjoyment of the Everglades National Park, including not only this generation of American citizens, but generations unborn. He served a 58 page complaint against the promoters of the jetport. Co-defendants in the case were John A. Volpe, Secretary of Transportation of the United States of America and the Dade County, Florida Board of County Commissioners, Acting as Dade County Port Authority. One environmentalist lawyer against the combined forces of local, state and federal government --hardly a match?

Or was it?

Yannacone's strategy was essentially the same as that of the Environmental Defense Fund in the Cross-Florida Barge Canal case, except that it placed even greater emphasis on a scientific study of the projected damages the jetport would cause to the environment. Yannacone's class action was also based on the alleged violation of the fifth, ninth and 14th amendments of all those who wished to enjoy the unspoiled natural resources of the Everglades.

Yannacone traced eight specific hazards to the environment which he claimed would be caused directly or indirectly by the construction of the "Big Cypress Swamp Jet Port":

1. Water pollution. The drainage and canalization of the area--essential to the construction of the

airport --would radically alter the water system of the entire region and upset the balance of the Everglades ecosystem. Another form of water pollution is the possibility of eutrophication, a technical term for the widespread growth of algae which can be caused by the discharge of wastes containing phosphates into natural waterways. Such wastes would inevitably accompany the large-scale construction projects required for the jetport.

2. Pesitcide contamination. The quantities of DDT found in chemical analysis of the eggs of certain Everglades birds is already just under the danger level as a result of contamination from the present usage of the pesticide in Dade County. A new urban concentration around the proposed jetport would require extensive use of pesticides to control mosquitoes from nearby swamps. As a result, increased DDT contamination would most likely threaten numerous species of wildlife in the Everglades.

3. Air pollution. The fallout of jet exhaust during landings and take-offs would be certain to have an adverse effect on the presently pure atmosphere above the swamps, and would also be dissolved into the natural waterways below. Furthermore, there would be appreciable air pollution from exhaust fumes of the automobiles which could be expected to jam the new superhighways linking the jetport with the Metropolitan Miami area.

4. Danger of extinction for some species of wildlife. Numerous species of wildlife which are already on the list or rare and endangered species could be pushed into extinction by the spoilage of their natural breeding grounds. Among those threatened are 12 species of birds (Yannacone listed them), especially the extremely rare Cape Sable sparrow and the wood ibis; four species of mammals (the Mango fox, squirrel, manatee and Everglades mink), and the rare and endangered American alligator. In addition, the area is known to contain 15 to 20 species of amphibians and 55 to 60 species of reptiles, all performing vital roles in the food chain of the ecosystem. Rare

tropical plants would also be threatened by side effects from the jetport, including species of tropical plants such as orchards and ferns which are found nowhere else in the United States.

5. Noise pollution. The constant noise along the jet corridor would disrupt the wilderness along the northern part of the Everglades National Park and even more so in the Big Cypress Swamp to the north.
6. Disturbing Indian Tribes. The Miccosukee Indians would be suddenly subjected to 24-hour noise bombardment by powers utterly beyond their control.
7. Bird strikes. Large flocks of birds, especially large water birds, would pose a significant aviation hazard, from ground level to 2,000 feet. The presence of small animals on the runways during flood periods would aggravate the problem because they would be crushed by airplanes and attract carrion-eating birds.
8. Fire and smoke. The combination of bird strikes, pest insects from swamps and small animals seeking refuge from high water on the runways would doubtless prompt authorities to drain much of the jetport area, and property development around the jetport would cause other large expanses of land to be drained. This, in turn, would greatly increase the risk of fires and permanently destroy the ecological balance of the entire south Florida region.

Yannacone concluded by arguing that the negative effects of the jetport would be irreparable. Since no damages paid after the fact could restore the ecology of the region, the only alternative would be to prohibit its development. Yannacone won his point. He succeeded in blocking the construction of the jetport -- at least temporarily. However, there are still considerable economic and political pressures for the construction of such a facility, making it imperative for environmental protection groups to maintain a constant awareness-both legal and scientific.

The successful intervention of environmental forces against the Cross-Florida Barge Canal and the proposed Big Cypress Swamp Jet Port attests to the effectiveness of organized effort by private citizens to safeguard the environment of their nation -- even when the opposing force is their own government.

* H. Robert Morrison, "Urbanization: the Great Migration," As We Live and Breathe," National Geographic Society, (1971), p.166.

** Haynes Johnson, "Concerned People: Key to Tomorrow," As We Live and Breathe, National Geographic Society, (1971), p.218.

TEACHER COMMENT NO. 15 : The Environment Becomes a Political Issue

Ecology is one of few issues which transcends lines of state, party, ideology and age. As such, it has become political TNT.

What politican could afford to come out AGAINST ecology? It would be roughly akin to coming out against motherhood. But although the environment crisis united liberals, moderates and conservatives, it has been seized upon as a prized possession in partisan politics. The Democrats, especially Presidential aspirant Senator Edmund Muskie, have adopted the environment, along with Vietnam and the economy, as primary issues. Sponsor of much anti-pollution legislation, Muskie accused the Nixon Administration of giving more "rhetoric" than substantive support to the environmental program. Senator Gaylor Nelson (D-Wisconsin) opened the Second Session of Congress with a comprehensive list of proposals, including the adoption of a Constitutional Amendment"...which will recognize and protect the inalienable right of every person to a decent environment." * He called for annual federal expenditures of $20 to $25 billion to protect the environment. Democrats united to pledge an all-out assault on pollution.

Possibly due to its preoccupation with Vietnam and inflation, the Nixon Administration permitted the Democrats to seize the early initiative in the environmental arena. But by early 1970 the Administration was gaining ecological momentum. In his 1970 State of the Union Address, President Nixon proposed "the most comprehensive and costly program (in environment protection) in the nation's history. ** The program called for the expenditure of $10 billion in the interest of clean waters, new methods for land acquisition, research and enforcement concerning automobile pollution and development of a "national growth policy." Muskie retorted that the President's "rhetoric was excellent," but that he was unwilling to spend the money. Clearly, Muskie was converting his long reputation in environmental protection to political advantage. In its January

26 issue, Newsweek Magazine reported that Robert H. Finch (then Secretary of the Department of Health, Education and Welfare) had ordered Muskie's name expunged from all HEW publications and his picture deleted from all department films.

The political significance of ecology is not limited to the national scene. In their "state of the state" messages, three Republican governors in the Northeast, Nelson A. Rockefeller (New York), Deane C. Davis (Vermont), and Francis W. Sargent (Massachusetts), all set forth extensive antipollution programs. The new governor of Virginia, Linwood Holton (R) established environmental protection as the top priority of his administration. California was a pivotal state in the environmental politics which preceded the 1970 midterm elections. Governor Ronald Reagan devoted much of his "state of the state" address to containing pollution, but Democratic gubernatorial opponent Jess Unruh later followed Muskie's example, attacking the Reagan administration for too much talk and too little action. Reagan won re-election, but Rep. John V. Tunney (D) opened a successful campaign against incumbent Senator George Murphy (R) by touring California's worst pollution spots.

The impetus for environmental protection has come largely from the nation's youth, especially on college and high school campuses. Environmental protection groups have mushroomed across the country. Students are requesting the inclusion of more courses on ecology and environmental protection in the curriculum. Earth Week in 1970 included a nationally-organized series of ecology "Teach-ins" on college and high school campuses across the nation, designed to increase public awareness of environmental issues.

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*Congressional Quarterly, "Man's Control of the Environment," (Washington: Aug. 1970), p.2.

** Ibid.

TEACHER COMMENT NO. 16 : Conservation Movement Modernizes

Increasing public awareness of the need to protect the environment has resulted in substantial changes in the conservation movement which initiated that awareness. Better-funded conservation groups are becoming larger and more sophisticated, and many are becoming more militant. New avenues are being followed in defense of the environment.

The two largest conservation organizations in the nation are the Sierra Club and the National Audubon Society. The 78-year-old Sierra Club, based in San Francisco, has seen its membership balloon from 15,000 to nearly 85,000 in the last decade, due especially to an influx of memberships in the East, where environmental activism trends increased membership from 750 to 19,000. An internal struggle within the club resulted in the ouster of Executive Director David Brower, who espoused a more militant brand of activities than many club officials could accept. Brower promptly organized a new group known as "Friends of the Earth," which is committed to intervene in political campaigns in behalf of environmental protection, deliberately foregoing tax-exampt status in order to do so. Even more militant organizations, staffed primarily by young activists well versed in the strategies of confrontation, have sprung up. These groups, such as Ecology Action, Ecology Center and Zero Population Growth, have all exerted a militating influence upon older, more established organizations such as the Sierra Club and the Audubon Society.

Militancy alone will not adequately equip conservation groups for the battle to preserve the environment, however. What is needed is technical expertise - lawyers, ecologists, engineers and other professionals who are able to understand, and thus combat, the subtle aspects of environmental pollution. The Sierra Club, for instance, has depended more and more on the advice and assistance of members who possess the necessary skills. Other sources of technical assistance are becoming available to conservation groups.

Within a week of his resignation as Secretary of the Interior, Stewart Udall, for example, formed a consulting firm called The Overview Group, dedicated to "...work for governments and industries to create a better environment for man." *

One of the most effective weapons in the conservationists' arsenal is the political lobby. Their strongest influence upon legislators is to organize their constituents to support antipollution measures or oppose measures which might be harmful to the environment. An example of this process was seen in the passage of the Clean Water Bill in 1969, when conservationists were able to mold a coalition of organizations and special interest groups to lobby for the bill. A Sierra Club representative observed that the allies wielded far more influence than the conservation groups themselves. Prominent members in the environmental "alliance" are certain labor unions, such as the United Mine Workers, the peace movement, the academic and scientific communities, professional societies, entertainers, and - especially - the youth movement.

The other potent weapon in the conservation campaign is the environmental lawsuit. Many young lawyers are entering the field of environmental law, and law schools are adjusting curricula to accommodate this new direction. The purpose of such lawsuits, in addition to half specific threats to the environment, is to apply pressures to both the executive and legislative branches of the government. Victor J. Yannacone, a nationally prominent environmentalist attorney, declared, "Every piece of enlightened social legislation that has come down in the past 50 or 60 years has been preceded by a history of litigation in which lawyers around the country have focused forcibly the attention of the legislature on the inadequacies of existing legislation." **

*Congressional Quarterly, "Man's Control of the Environment," (Washington: Aug. 1970), p.4.

** Ibid.

TEACHER COMMENT NO. 17 : Coalition Blacks Timber Bill

The political power of organized conservation groups was demonstrated in their successful campaign to block a bill which would have authorized increased federal timber cutting in national forests. A power struggle developed between two Congressional lobbies -- the conservation coalition and the original lobby of timber and housing interests which had provided the impetus for the bill. The outcome, on February 26, 1970, was a refusal by the House of Representatives to consider the bill. The refusal came on a roll call vote of 228-150. The defeat of the bill manifested the ability of conservation organizations to compete effectively in the legislative arena.

The basic strategy of the pro-lumbering alliance was to establish a relationship between the federal low-income housing development project and increased timber cutting, which they claimed was essential to furnish raw materials for housing development. An attempt was made to ally the timber cutting proposal with a crusade to help the impoverished ghetto dweller receive improved housing. Conservation forces launched a spirited rebuttal, asserting that the sudden concern of the timber industry for the urban ghetto dweller was a bald piece of prevarication designed to imbue a bill which would decimate the national forests with an aura of moral necessity.

The timber bill originated with timber shortages between 1967 and 1969 which elevated prices and led to pressure from housing developers for increased sources of timber. Short-term causes for the timber shortage were a drought in 1967 which suspended many timbering operations due to fire hazard; unusually heavy snowfalls in the Northwest in January, 1969; a boxcar shortage, and an East Coast dock strike which curtailed deliveries. A long-term cause of the domestic timber shortage was the substantial exportation of timber -- especially to Japan.

After hearings before two different subcommittees which were intended to incorporate suggestions from conservation groups and the Forest Service, the National Forest Timber Conservation and Management Bill (HR 12025) was drawn up. The major provision of this bill was to set up a High Timber Yield Fund to finance a new lumbering program within the national forest system. The program, however, was to be subject to the provisions of the Multiple-Use Sustained Yield Act of 1960, which was designed to assure a balance between economic exploitation of the natural forests and the preservation and development of recreational facilities, range lands, watersheds and fish and wildlife resources. Lumbering was to be limited by specific management practices. The Secretary of Agriculture was directed to submit to Congress within one year of the enactment of HR 12025 a program for developing and managing all national forest resources, and to establish policies on timber sales which would guarantee small business concerns an equitable proportion of revenue. Despite the apparent attention to environment protection, conservation groups immediately voiced vigorous protests against the bill, arguing that it would undermine the concept of multiple use and pave the way for exploitation of the natural forests, at the expense of recreational and ecological aspects of those areas.

The battle lines were drawn. Proponents of the bill included the National Association of Home Builders, the National Forest Products Association, the National Association of Housing and Redevelopment Officials, the United Brotherhood of Carpenters and Joiners, the Western Governor's Conference, the Associated General Contractors of America and the American Forest Institute. The opposition included the Citizens' Committee on Natural Resources, the Izaak Walton League of America, the National Audubon Society, the National Rifle Association, the Sierra Club, Trout Unlimited, the Wilderness Society, the Wildlife Management Institute, the National Wildlife Federation, Friends of the Earth and the United Auto Workers.

Heated debate ensured. Arguments and counter-arguments were presented on several issues. Supporters of the bill maintained that it was necessary to combat a chronic national housing deficiency. Opponents replied that it was high interest rates, land prices and labor prices which had curtailed housing development -- not a timber shortage. They urged consideration of wood substitutes for housing accusing timber interests of attempting to tie up the construction materials market. Proponents of the bill argued, in turn, that the manufacture of synthetic wood substitutes would entail substantial despoilage of the environment due to air and water pollution which would result from industrial wastes. Opponents suggested that the exportation of timber to Japan be curbed in order to replenish the domestic market without over-lumbering the national forests. Such a measure would create a disadvantageous balance of trade for the United States, retorted the timber interests. They further claimed that judicious development of the national forests would actually benefit conservation by preventing compacted soil and controlling erosion, thus enhancing the forests' watershed capacities. Not so, contended opponents. Conservation interests argued that the greatest increases in logging resulting from the bill would occur in virgin stands of timber along the Pacific Coast and in the Rocky Mountains, where the ecological balance is especially precarious. They also maintained that the Forest Service was already marketing timber at a rate which was approximately 50% in excess of that which was commensurate with sound forestry. Supporters claimed that the bill would enable the Forest Service to protect certain forest areas as unspoiled wilderness by developing others. Came the counterargument: the very lands to be lumbered included six to eight million acres of prime wilderness. Finally, proponents of the bill argued that it was essential to allocate the new funds from timber cutting to the Forest Service. Opponents replied that the agency was dependent on appropriations anyway, with all unused funds to be returned.

The report presented by the House Agriculture Committee described the timber bill as one solution to the deplorable housing conditions which degraded many citizens of the nation and was extremely injurious to the economy. It was endorsed by Secretary of Agriculture Clifford M. Hardin and Secretary of Housing and Urban Development George Romney. Romney stated that it would be difficult, if not impossible, to furnish necessary housing for the nation without a substantial increase in timber production.

Environmental forces rallied to the counter-attack. Sierra Club Executive Director Micheal McCloskey accused the timber industry of masquerading as a social crusader while actually pursuing its own economic aggrandizement. Some Congressmen were skeptical about claims that more intensive lumber harvesting in national forests would help fulfill the 10-year goal of the 1968 Housing Act to construct 26 million units of new and rehabilitated housing. One urban Congressman, Rep. John Conyers, Jr., (D-Michigan), withdrew his support for the bill, arguing that the chief impediment to housing development was not lack of lumber, but the inflation of financing and other costs. Rep. James H. Scheuer (D-New York) said the bill was not only a poor conservation measure but a poor housing measure. He advocated the development of alternative materials to wood.

The staunch Congressional opposition the bill encountered revealed the influence of an effective conservation lobby. Eight national conservation organizations sent a telegram to every member of Congress contending that the bill "...threatened America's national forests, scuttled historic multiple-use practices and undermined prospective parks, wilderness, open space and recreation areas." * Representatives of five of those organizations - the National Audubon Society, the Sierra Club, the Wilderness Society, Friends of the Earth and Trout Unlimited -- canvassed Congressional offices. Sierra Club workers assembled an information kit outlining the environmental consequences of the proposed logging, the impact on housing and the implications for forestry. It was distributed to members of Congress. The Sierra Club, which in 1968 had sacrificed its tax-exempt status by becoming involved in political lobbying, also dispatched its Northwest representative, Brock Evans, to pay personal visits to between 25 and 30 Congressional offices. In addition to the Sierra Club, three other organizations - the Izaak Walton League of America, the National Rifle Association and the Wilderness Society -- distributed information to members and urged them to telephone or telegraph representatives.

Lobbyists supporting the bill, of course, also collected and distributed information. The National Forest Products Association and the National Association of Home Builders published jointly a 36-page booklet entitled "Housing Goals and the Future Course for the National Forests," urging adoption of HR 12025. Some 5,000 copies were circulated - to members of Congress, newspaper editors and editorial writers and to mass media journalists. Urban lobby groups such as the National Urban League, the National Association of Housing and Redevelopment and the National Housing Conference all endorsed the measure.

Judging from the disposition of the matter, however, it was apparent that the conservation coalition had formulated a more cogent argument and a more cohesive campaign. The defeat of the timber bill probably heralded the arrival of a new and powerful political lobby upon the Congressional scene - one whose sole objective is the preservation of the nation's environment.

*Congressional Quarterly, "Man's Control of the Environment," (Washington: Aug., 1970), p.72.

TEACHER COMMENT NO. 18 : Disagreement on How to Fight Pollution

The development of a comprehensive national campaign against pollution will inevitably result in struggles between many different interest groups. There is virtually universal agreement that a corrective program is necessary, but the "HOW" - development of effective instruments for the program - is bound to become the nucleus of controversy. The environmental ship, like the anti-poverty program, runs the risk of foundering on the shoals of internecine power struggles and partisan politics.

Of paramount importance to the clean-up of the environment is the fundamental question: "Who'll pay for it?" The cost of cleaning up pollution in the United States by the end of the century has been estimated at $300 billion. The three basic sectors of society involved are the producers, the consumers and the government. All, of course, are inter-related. American Airlines president George A. Spater maintained that consumers are prepared to assume the added costs of environmental control and to elect officials with like priorities. Spater said that producers must anticipate more regulation by government and take into account growing public pressure for environmental improvement. Much has already been done in this direction. New antipollution companies have been established and existing corporations have set up antipollution enterprises as part of their diversification programs, often devoting much public relations to these ventures. A Ralph Nader task force report on air pollution accused many corporate giants of entering the battle to clean up the environment at the same time they continue to pollute it. Many corporate executives feel that companies who undertake voluntary clean-up campaigns are placed at a competitive disadvantage, and therefore advocate uniform federal controls. There is, however, the possibility that smaller companies, with less extensive financial reserves, would find such controls economically discriminatory.

A pollution control program must take into account other factors besides financial considerations.

Political and ideological issues are also at stake. Vital questions of individual and corporate liberties are involved. There is also the matter of governmental jurisdiction, ranging from local municipalities on up to national sovereignties.

The implementation of an antipollution program will generate heated controversies on several fronts. One prominent issue is whether the basic machinery for control should be incorporated within the profit system or considered a collective social responsibility. Should control measures be largely compulsory, with appropriate punitive measures, or build mostly upon economic incentives - or a combination of the two? In any case, specific instruments must be developed. The extent of federal jurisdiction must be clearly delineated, and the necessary agencies established. The formation of policy-making committees is likely to run into a traditional attempt by industrial lobbies to influence the regulatory agencies, and committee membership itself carries the possibility of increased political leverage. To pave the way for reconciliation of these contending factions, President Nixon has attempted to provide for broad representation at a policy-making level, hoping that the active participation of interest groups from the outset would weld a composite program which would encounter less debate on up the legislative line.

Nevertheless, pressure fights between interest groups are likely to erupt both prior to and after the formation of government regulatory agencies. The automobile industry, for example, in response to a mounting clamor against air pollution, began in 1971 marketing cars which could run efficiently on lead-free gasoline. The opposition in this case was consumer advocate Ralph Nader, who accused the industry of having repressed for 20 years the development of non-polluting alternatives to the internal combustion engine, in order to promote their own economic interest.

Another colossal struggle is the conflict between conservation groups and electric power companies. Under fire for air pollution from fossil fuel plants and thermal pollution from nuclear installations, the power industry has launched a counter-attack in public relations. Senator Lee Metcalf (D-Montana) accused power companies of spending more on advertising their antipollution programs and the need for more power than on actually developing the technology necessary to end air and thermal pollution. The power comapnies, along with the Federal Power Commission and the Atomic Energy Commission, claim that the demands of environmentalists have created critical national power shortages. They insist that new plants must be constructed immediately to keep pace with growing demands for power.

Government agencies will thus be faced with the difficult task of reconciling various vested interests before an effective comprehensive antipollution campaign can be launched. Before such a program can properly be delimited, the problem itself must be defined. Exactly what constitutes a liveable environment? How much should a program of environmental protection encompass? In the United States there is an alliance - in many cases an overlap - between anti-war forces and ecology activists. Some leaders argue that since peace is an essential aspect of a healthful environment, the prevention of war and the preservation of the environment must march hand in hand. Some groups call for more stringent governmental pollution controls over individuals and industries. Others agree that action is necessary, but express fears of over-reaction to the environmental crisis which would endanger individual and corporate liberties through repressive governmental measures. United Nations Secretary General U Thant observed that the profit system of some countries was a major causative agent for the environmental crisis. Corporate leaders, on the other hand, contend that the most viable solution to the problem of pollution is to turn the profit motive in defense of the environment. They urge adoption of governmental incentives such as tax credits which would make environmental protection a profitable business proposition. Compliance, they conclude, would then be a natural consequence.

TEACHER COMMENT NO. 19 : Human Life Endangered by Pesticides

"Ban DDT!"

The proliferation of bumper stickers bearing this slogan attests to mounting public concern for the consequences of indiscriminate use of pesticides, herbicides and fungicides in this country. The story is not so simple, however. Although DDT is the main target of the public outcry, the controversy actually includes many other complicated chemical compounds, and its resolution will require a delicate balancing of priorities.

The first significant governmental step in the limitation of the use of DDT occurred on November 20, 1969, when Secretary of Agriculture Clifford M. Hardin made a widely-publicized announcement that registrations would be cancelled for four uses of the chemical - on shade trees, tobacco plants, in or around the home and in marshes (with the exception of specific control of disease carriers). Other crops were not affected. Reaction was immediate: a group of manufacturers filed administrative appeals against the cancellation order. Since laws concerning the regulation of pesticides allow the continued production and marketing of the chemicals during the appeal process, usage could continue for up to two years after the original order, or even longer if the manufacturers sought judicial relief after exhausting available administrative remedies. Hardin's announcement came eight days after the Presidents Commission on Pesticides and their Relationship to Environmental Health issued a report which recommended that DDT be banned in the United States within two years and alternate pesticides be studied. In June, 1970, however, the Department of Agriculture filed a statement with the U.S. Court of Appeals that DDT did not constitute an "imminent hazard," and should therefore not be banned from general use. This statement, in turn, was incorporated in lawsuits being brought against the Secretary of Agriculture and the Secretary of Health, Education and Welfare by environmental groups. As a result of the HEW suit, the Secretary of the HEW developed a procedure for establishing DDT limits in or on agricultural commodities. Another environmentalist lawsuit challenged the use of the herbicide 2,4,5-T, which was at one point in widespread use as a defoliant in South Vietnam. The Department of the Interior, in June, 1970, prohibited the use of DDT, 2,4,5-T, and 14 other substances on the more than 500 million acres under its jurisdiction. Usage of other chemical agents was also restricted. Some states have enacted their own limitations on the use of pesticides. The imposition of federal restrictions, however, has been hampered by lengthy appeals and lack of integration between government agencies.

Despite a bevy of bills which were introduced to Congress, the only recent law on pesticides which had actually been passed as of 1970 was a provision of the Water Quality Improvement Act of 1970 which called for research into the ecological effects of pesticides. The chief legislative foundation for regulation of pesticides was still the original Federal Insecticide, Fungicide and Rodenticide Act of 1947, which barred the interstate commerce of unregistered pesticides and compelled manufacturers to demonstrate the safety of their products. Several other laws passed from 1954 to 1967 gradually extended federal involvement in the control of pesticides, but they were generally confined to limitations on specific pesticides, regulating the actions of governmental bodies such as the Department of the Interior, and encouraging research. The most significant act was probably the implementation of a nationwide monitoring program by the Agriculture Department in 1967.

Bills which were still pending in 1970 included proposals to forbid the interstate sale or shipment of DDT, establish a permanent 12-member national commission on pesticides, extend registration requirements to pesticides intended solely for export as well as domestic products, strengthen existing regulatory powers within governmental departments concerned with pesticide control, broaden the dairy indemnity program, which reimburses farmers for losses incurred from products contaminated by pesticides; restrict the use of pesticides which defile navigable waterways, and provide for more research on pesticides and herbicides.

The major obstacle delaying Congressional passage of the bills enumerated above is the presence of powerful lobbies representing industrial interests. The Industry Task Force for DDT, under the aegis of the National Agricultural Chemicals Association, has spearheaded the fight against restrictions on pesticides. There are also pressure groups which have opposed the dissemination of pesticides. These include the Environmental Defense Fund, Inc., the National Audubon Society, the Izaak Walton League of America, Environmental Action and Friends of the Earth. Traditionally, however, the industrial interests have dominated the scene and vitiated the effectiveness of the 1947 Federal Insecticide, Fungicide and Rodenticide Act. In November, 1969, the House Government Operations Committee dressed down the Pesticides Regulation Department and called for the Justice Department to conduct an investigation of three consultants on possible conflict-of-interest charges. Subcommittee Chairman L.H. Fountain (D-North Carolina) claimed the Regulation Division had failed almost completely to enforce the 1947 act. A Government Accounting Office study revealed that out of 750 violations of the act discovered by the Regulation Division - 562 of them considered major - only 106 were subjected to enforcement action. Efforts to recall hazardous products from the market were infrequent. It was also found that many pesticides had been approved despite objections from the HEW regarding potential dangers, that approval had been granted to pesticides that were almost certain to cause illegal adulteration in food, that warnings on pesticides labels were not always clear, that expeditious action was not always taken to cancel hazardous products, and that no procedure had been devised to warn consumers against such products.

One step which may reduce the efficacy of lobbying by pesticide interests is the formation of the Environmental Protection Agency. This is a centralized governmental agency which has assumed and synthesized investigatory and regulatory functions pertaining to environmental protection. These functions had previously been dispersed among several different government agencies, such as the Agriculture Department, the Department of the Interior and the Department of Health, Education and Welfare. Since the diversified functions of the other agencies sometimes created a conflict of interests (as is the case regarding the Department of Agriculture's policies on pesticides), the transfer of authority to the EPA is likely to result in more definitive and better integrated governmental programs which, in turn, would be less susceptible to the demands of any one pressure group.

The pesticides issue revolves around the chemical compound Dichlorodiphenyltrichloroethane -DDT. DDT is a chlorinated hydrocarbon, which is one of three major categories of pesticides. (The other two are the organic phosphates and the carbamates.) Tested during World War II, DDT was found to be an extremely effective insecticide which could control malaria and typhoid. It was considered safe for human use. After World War II, DDT rapidly acquired a reputation as a panacea for insect problems.

Another substance indirectly related to pesticides, which has become the subject of considerable ecological controversy of late is mercury. On July 14, 1970 the federal government announced that it would initiate civil suits against eight manufacturers which were allegedly dumping mercury into lakes and rivers. Studies had revealed that lakes and rivers in up to 20 states were contaminated with poisonous mercury. Most mercury pollution results from the dumping of chemical wastes. The chemical is then absorbed by fish and other animals, and it may move up the food chain to the level of human consumption. Mercury contamination can also result from seed dressings and other pesticides which contain mercury compounds.

The issue of pesticides is extremely complex. Many arguments have been advanced for and against their use. DDT, for example, was the major cause for virtual elimination of malaria within the United States (60,000 cases annually in 1942; 2,000 in 1950). R.G. Van Buskirk, in an article published in Farm Chemicals in July, 1969, estimated that DDT had prevented 500 million illnesses and saved 25 million lives in the 25 years it has been used on a worldwide basis. And Dr. G.K. Kohn of the National Agricultural Chemicals Association reported that 39.5% of the 1.6 billion people who lived in areas which were formerly malaria-infested were now free from the ravages of the disease, and that another 38.6% were protected by ongoing programs. DDT manufacturers contend that these benefits outweigh any environmental ill effects caused by the chemical. In the 1950's, the federal government launched extensive insect-control programs, using DDT to destroy pests which threatened farm products, shade trees and human beings. The "enemy" included the gypsy moth, the Japanese beetle, Dutch elm disease and the fire ant. Results were mixed. Conservationists claimed that applications of DDT were often careless and poorly timed, destroying as much plant and animal life as insect pests.

The argument for DDT usage is not limited to the control of disease. The chemical has also had a dramatic impact on agricultural production. Crop yields per acre of corn and rice in the United States, for instance, nearly doubled from 1947 to 1968. Similar increases occurred in cotton production, where DDT had been the chief instrument in a boll weevil eradication campaign. Van Buskirk stated that without the use of DDT and other inexpensive, persistent pesticides, the cost of food would double within five years, and within 10 to 15 years Americans would run short of essential foods. The food problem is even more significant abroad. If DDT was banned in the U.S. and foods with DDT residues excluded from the U.S. market, farmers in underdeveloped countries could not produce competitive products if compelled to purchase higher-priced pesticides with shorter-term potency.

The benefits that DDT has provided for man are significant. But the costs of its usage seem to be equally great. Environmental scientists have linked DDT residues with reproductive failures and near-extinction in some species of birds, including bald eagles, peregrine falcons, brown pelicans and Bermuda petrels. DDT apparently interferes with the egg-laying mechanism, causing thin-shelled eggs. Fish larva have also been killed by DDT. Such contamination may be passed from species to species, on up the food chain, by a process known as biological magnification. DDT used in underdeveloped countries, especially in the tropics, often escapes into the atmosphere in vapor form where it is distributed globally. DDT residues have even been found in Arctic penguins! In man, studies have shown correlations between high DDT levels and cerebral hemorrhages, liver diseases and stomach diseases. It has caused tumors in mice. Fat cells from human victims of cancer contained more than twice as much DDT as fat from victims of accidental deaths, a University of Miami Medical School study revealed. Paul R. Ehrlich, a biologist at Stanford University, predicted the death of oxygen-generating oceanic plankton from the absorption of DDT could lead to a shortage of oxygen to breathe. The major threat from DDT is cumulative; it is the least potent of the chlorinated hydrocarbons on a short-term basis. But DDT's sister pesticides such as aldrin can be fatal to man if ingested or absorbed through the skin. Most organic phosphates and carbamates are highly poisonous to man. They cause increasingly intense nerve impulses which may result in tremors, convulsions and death. The danger is exacerbated by the fact that residues from two relatively harmless phosphates or carbamates may enter into a chemical reaction which produces a thrid and lethal compound.

How, then, can medical and agricultural necessity of pesticides be reconciled with the damage they cause to the environment? Conservationists have recommended the use of short-term specific pesticides instead of persistent general agents such as DDT . They also suggest rapid development of biological control techniques, such as the use of insects' natural enemies, and agricultural techniques such as alternative row planting, to control pests. They advise housewives to be less fastidious concerning harmless blemishes on the outside of fruits and vegetables, claiming that their demand for unmarred produce has resulted in extensive usage of pesticides.

Other solutions may be forthcoming from scientific research. Some possibilities are the use of more highly specific pesticides - harmless to most life, affecting only certain species of insects. Nontoxic chemical substances may be used to attract mating male insects into death traps. Juvenile hormones which disrupt insect life cycles, substances which sterilize male insects are also being developed. Research is being conducted on a chemical which may accomplish much the same functions of DDT, without its toxic longevity.

The issue of pesticide usage generates almost irreconcilable conflicts in priorities between human needs and environmental protection. The rapid development of scientific alternatives appears to provide the only viable means of compromise.

TEACHER COMMENT NO. 20 : Mobilization for Restoring the Environment

A call for total national mobilization in defense of the environment was the theme of the environmental message President Nixon delivered before Congress on February 10, 1970. Citing an expansionist frontier heritage as the fundamental cause for abuse of the national environment, the President called for new philosophies of land, air and water use. He discounted malice as a significant cause for the environmental crisis, attributing the problem instead primarily to economic pressures and a basic ignorance of the social costs of technological expansion. The President called for stricter regulation, expanded government action, greater citizen involvement, and comprehensive programs which coordinated the efforts of citizens, industries and government to preserve the environment. To implement these concepts, he outlined a 37-point program, including 23 major legislative proposals and 14 new measures to be taken by administrative action or Executive Order. He divided this new effort into five major categories: water pollution control, air pollution control, solid waste management, parklands and public recreation and organizing for action. Summaries follow:

WATER POLLUTION CONTROL. The three major sources of water pollution are municipal, industrial and agricultural wastes. All three must be controlled in order to achieve complete restoration of our national waterways. At present, the most difficult of the three to bring under control are agricultural wastes, which derive from animal wastes, eroded soil, pesticides and fertilizers. It will be necessary to modify agricultural practices, exercise greater care in the disposal of animal wastes, develop better soil conservation methods, and to discover new fertilizers and chemical pesticides. Natural pest control techniques should also be developed. Some programs are already underway. Action has begun to phase out the use of DDT and supplant it with new pesticides which are less injurious to the environment. Controls are being placed on wastes from concentrated animal feed-lots. Research must be intensified in search of new means to reduce agricultural pollution while maintaining productivity. In the meantime, we must bring existing technological capabilities to bear upon the other two sources of water pollution.

The key to combatting water pollution from improperly processed municipal wastes lies in better cooperation among Federal, state and municipal governments. In the four years following the passage of the Clean Waters Restoration Act of 1966, federal appropriations for building municipal sewage treatment plants have amounted to only about one-third of the amounts authorized. Moreover, many municipalities have encountered considerable difficulties in selling bonds to finance their share of construction costs. It will cost an estimated $10 billion in the next five years to provide the necessary municipal facilities to assure compliance with national water-quality standards. This expenditure, based on a nationwide survey of extant facilities plus a projection of additional needs within the five-year period, will assure secondary waste treatment in all communities, and additional processing in areas with special needs, especially in communities along the Great Lakes. The President proposed a Clean Waters Act to be passed in fiscal 1971, authorizing federal expenditures of $4 billion - $1 billion per year for the following four years - to be matched by state and municipal funds to reach the necessary $10 billion. He further called for the establishment of a new Environmental Financing Authority, to buy bonds from municipalities if necessary to insure the raising of necessary local funds to match federal outlays. (The EFA could then sell its own bonds on the taxable market.)

In addition to providing funds, it is imperative to coordinate pollution abatement efforts so that the efforts of one municipality are not negated by the negligence of a neighboring community. Poorly designed and inefficiently operated facilities must be ferreted out and corrected. To achieve these ends, the present rigid system of allocation must be revised legislatively in order to allow special emphasis to be given to areas where the need is greatest and where the greatest improvements in water quality are possible. Four other reforms are to be carried out by the Secretary of the Interior under existing authority: 1) Federally assisted treatment plants must conform to prescribed standards of design, operation and maintenance, and be operated only by state certified operators. 2) Municipalities should impose users' fees upon industries which discharge wastes into municipal sewage systems. 3) Abatement projects should be developed systematically for entire river basins, by means of collecting data on pollution and conducting effluent inventories. 4) Where ever feasible, communities should cooperate in the construction of large and economical regional treatment plants.

As far as industrial water pollution is concerned, it is essential to develop strict standards and enforcement, because industries who have complied voluntarily with non-mandatory water quality criteria have often been placed at a competitive disadvantage with those who continue to pollute. Existing standards are too vague to be enforced equitably, and there is considerable disjunctiveness in jurisdiction by different levels of government. It is therefore necessary to develop a unified program which integrates federal, state and private efforts to abate water pollution; provides for effective nationwide enforcement, and rests on the basic principle of collective ownership of the national waterways. The President proposed a seven-point program: 1) State-federal water quality standards should be amended to impose precise effluent requirements on all industrial and municipal sources. 2) Violation of said criteria should be cause for court action. 3) The Secretary of the Interior should be afforded more legal muscle, including subpoena and discovery power. 4) Fines of up to $10,000 a day should be imposed on those who fail to meet water quality standards or implementation timetables. 5) Immediate injunctive relief should be available where water pollution constitutes an immediate health hazard or threatens to wreak irreparable damage upon the environment. 6) The federal pollution control program should include ALL national waterways, both inter and intra state. 7) Federal operating grants to state pollution control enforcement agencies should be trebled (from $10 million then to $30 million in fiscal year 1975), to help them meet the burdens of expanded and more stringent enforcement necessary to comply with federally imposed water quality standards.

AIR POLLUTION CONTROL. Most air pollution is caused by the combustion of fuels. About half emanates from motor vehicles, the other half from stationary sources. Although our existing technology for controlling air pollution is not as advanced as our capacities for taming water pollution, there is a great deal we can - and must - do at once. Further technological advancement must be encouraged concurrently. Although motor vehicle emissions have already been made subject to some federal restrictions, emission levels still must be drastically reduced in the next decade. Two deficiencies in present law must be remedied. First, provisions must be made for testing representative samples of actual production vehicles for compliance with federal emissions standards, rather than examining prototype vehicles at the discretion of the manufacturer. Secondly, federal restrictions must also be imposed to regulate fuel composition and additives. Besides such short-term measures to abate air pollution from motor vehicle emissions, action must also be taken to develop alternatives to the internal combustion engine itself, in case the sheer number of cars in the future offsets improved pollution control measures on their engines. Full federal support is to be given to the research and development of an alternative, low-pollution vehicular power source. The President commended the voluntary efforts of automobile manufacturers to market vehicles capable of operating on non-leaded gasoline even prior to the imposition of the federal standard on fuel additives.

The major stationary sources of air pollution are industries, power plants, furnaces and incinerators. The need for effective governmental standards and enforcement is necessary here just as it was with water pollution, to prevent the economic exploitation of those who voluntarily clean up their effluents, by their less conscientious competitors. A uniform program which integrates federal, state and community standards will be necessary to avoid regional disparities in air quality standards. Under the Clean Air Act of 1967, the federal government has been establishing air quality control regions around the nation's major industrial and metropolitan areas, with states to implement necessary measures to comply with established standards within those areas. However, it has proven difficult to delineate many of the areas, and no provisions have been made for controlling air pollution in areas outside the regions delimited. Federal enforcement powers have not proven adequate to give sufficient support to state abatement programs. To correct these deficiencies, the President proposed five revisions in the 1967 act: 1) Federal air pollution standards should be nationwide, not restricted to specific regions. States should be given one year to develop abatement plans. Regions may, at their discretion, provide for measures more stringent than federal standards, but they must not be less strict. 2) Designation of interstate air quality control regions nevertheless should be expedited, in order to establish compatible abatement plans in interstate areas. 3) The federal government should establish national standards for facilities which emit pollutants that pose health hazards, and for certain classes of new facilities which could become major contributors to air pollution. 4) The federal government should have authority to initiate legal action in both inter and intra state pollution situations in the event of local non-enforcement. 5) As in the case of water pollution, failure to comply with air quality standards of implementation schedules should be punishable by fines of up to $10,000 per day.

SOLID WASTE MANAGEMENT. As the population increases, so does the amount of solid wastes produced. This has resulted in the allocation of large areas of precious land to dispose of such wastes. Especially troublesome are new packaging materials which are only partially combustible and non-biodegradable. Heading the list of wastes which are potentially re-usable but are not at present being adequately recycled are bottles, paper products and automobiles. The use of public funds to collect and dispose of solid wastes provides only a short-term solution to the problem. The goal of the federal government must be broadened to reduce the volume of wastes and the difficulty of disposal by encouraging constructive re-use. A great deal of our space research has been devoted to the development of self-sustaining environments, in which the same materials may be reprocessed and recycled to assure survival for a long period of time. This approach must be applied to solid waste disposal on earth. Research and development programs under the Solid Waste Disposal Act of 1965 must be renewed and expanded to meet these needs, with greater emphasis to be placed on recycling of materials and the development of bio-degradable packaging materials. In order to assure the re-use, recycling and easier disposal of commonly used materials, appropriate incentives and regulations should be researched and submitted to Congress for approval. The root cause of the problem of junk automobiles is the lack of economic incentive for the final owner to deliver his car for proper processing. Payment by wreckers for junk cars are often less than the cost of transporting the car to the yard. Sometimes towing fees may even be assessed by the wrecker. The result is an increasing rate of abandonment. In 1969, for example, 50,000 abandoned cars were towed away in New York City alone. The means of offsetting this situation is to apply the principle that the price of an automobile should include not only the cost of production, but of disposal. The present situation should be remedied by offering "bounty" payments as an incentive for proper disposal.

PARKS AND PUBLIC RECREATION. As population increases and mobility, income and leisure are all on the upswing, there is a corresponding increase in demand for recreational facilities. At the same time, land for such facilities is becoming increasingly difficult to come by, particularly in heavily populated areas. Strong positive federal programs will be essential to assure adequate recreational opportunities for generations of Americans to come. The federal government owns one-third of all the land in the United States - more than 75,000,000 acres. This land should be treated as a valuable resource and, like money itself, be made to serve the highest possible public good. In this direction, the President proposed full funding in fiscal 1971 of the $327 million available through the Land and Water Conservation Fund for additional park and recreational facilities, with priority to be assigned to locations easily accessible to people in urban areas.

An even more important measure, however, is the more effective use of existing federal land within the heart of metropolitan areas. Many federal facilities could function equally well - or better - in other locations, and the transfer or sale or existing land could be used to furnish urban dwellers with greatly-needed recreational facilities within easy reach of their homes. However, bureaucratic red tape - to wit, budgetary penalties for relocation of governmental agencies, even if the move is to the economic advantage of the agency involved - have precluded the implementation of such land re-use projects. In addition to calling for the removal of such artificial obstacles, the President, by Executive Order, established the machinery for reviewing all federally-owned real properties to determine if the property could best serve the public interest through its present use or via alternative utilization. He also proposed legislation to set up a program for relocating federal installations occupying sites which could better be developed for other purposes. In addition, the sources of income of the Land and Water Conservation Fund should be maintained and possibly increased to provide for the acquisition of additional parkland. The effect of these measures would be to provide a three-way program for augmenting park and recreation facilities by the sale of surplus property: a) through direct conversion from other uses, b) through sale of presently-owned properties and purchase of others with the proceeds and c) by selling one federal property and using the proceeds to bear the costs of relocation of another property and conversion of the original site to a recreational facility. Care should also be taken to provide for optimum use of existing federally-owned real property, with surplus property to be transferred to state and local governments for recreational use, at discounts of up to 100%. For example, the Defense Department recently arranged to make more than a mile of beachfront which had been closed to the public as part of Camp Pendleton available for recreational use. The remaining beach within the camp was sufficient to meet military needs, and the stretch of beach in question was thus converted from low-priority to high-priority utilization. Finally, the President proposed that portions of idle farmlands under federal subsidy instead be purchased by local governments, with federal assistance, to be converted into recreational facilities for people dwelling in rural towns. In addition, long-term contracts should be set up with private owners of idled farmland to provide for reforestation and for public use for such activities as hunting, fishing, hiking and picnicking.

ORGANIZING FOR ACTION. The protection of the environment requires a full national effort with sound coordinated programs. At a federal level, efforts for organizing such an effort are underway. The overseer of environmental programs is to be the Council on Environmental Quality. The Cabinet Committee on the Environment has been established to serve as a coordinating agency for various departmental activities which influence the environment. Re-assignment of environmental responsibilities among departments will be necessary to assure a better integrated program of federal leadership.

No matter how well organized governmental programs may be, however, the ultimate responsibility for successful implementation of an environmental protection program resides with the people. Private industry, in particular, will play a crucial role. As such, the U.S. Patent Office has been directed to give priority to the processing of applications for patents which could help curtail environmental abuses. Many industries have already taken the initiative to cut back on pollution, but greater organization and leadership is needed. The President expressed his intention to establish a National Industrial Pollution Control Council, through which he would work with industrial leaders to enlist increased support of business and industry in the reduction of pollution. The Council was also to work closely with the Council on Environmental Quality, the Citizens' Advisory Committee on Environmental Quality and the Secretary of Commerce in developing effective policies for curbing air, water, noise and waste pollution from industrial sources. He hoped that the new organization would make possible much voluntary industrial cooperation which would accomplish pollution-control objectives. As an example for correction, the Chief Executive vowed the swift abatement of all pollution caused by activities of the federal government itself.

In summation, the President stressed the need for modifying the traditional concept of conservation to include a new need for restoration of the environment. He called for the mobilization of all national energies for the task of cleaning up the environment. Vigorous federal leadership, active involvement of government at all levels, cooperation by industry and private groups, and determined participation by all citizens will be essential if the program is to succeed. The President concluded, "This task is ours together. It summons our energy, our ingenuity and our conscience in a cause as fundamental as life itself." *

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* Congressional Quarterly, Man's Control of the Environment, (Washington :1970), p.87.

TEACHER COMMENT NO. 21 : America's Open Space Problem

Land is becoming an increasingly precious commodity in America. Although there remain huge tracts of sparsely populated areas within the nation, the average American is feeling the rising effects of urban congestion. The reason for this problem is the uneven distribution of population; whereas one quarter of the nation's population occupies the entire expanse of the mountains and plains areas, the other three quarters are compressed into burgeoning megalopoli - vast urban concentrations such as the "Northeast Corridor" (Boston to Washington), "Chipitts" (Chicago-Cleveland-Pittsburgh), or "San-San" (California coast). There are approximately 2.3 billion acres of land in the United States, but the population is expected to increase from 200 million to 300 million within the next 30 years. At the beginning of this century, there was an average of 33 acres of land for every American. Now there are approximately 11. By the year 2000, the figure will be reduced to 7. While that ratio itself hardly seems cramped, it is important to note that most of the 50% population increase will probably be absorbed in existing or nascent megalopoli, rather than be distributed over wider areas through construction of new communities. In addition, it is necessary to maintain large tracts of oxygen-producing forest and preserve soil levels if the ecological life-support system of the earth is to maintain its precarious balance. Ecologically, each man consumes more acreage than he occupies physically.

The congestion of population in urban areas leads to problems of social disorganization; air, water and noise pollution; waste disposal, expanding ghettos, decaying central business districts, failing communication and transportation systems and the human illnesses of the city, or "urban neuroses." Standing in stark juxtaposition to the crowded urban areas are the vast stretches of farmland, much of it idled, which occupy nearly half (49%) of the nation's surface. Forests blanket another fourth of the land (26.4%), while cities take up only 8%. The amount of land presently devoted to wilderness areas, national parks, recreational areas and other preserves is 101 million acres, or 4.4%. These figures underscore the importance of developing better balanced land-use programs.

Primary responsibility for such re-utilization rests with the federal government, which itself owns over a third (770 million acres) of the land. At present, national land-use policies reflect the disjunctive interests of many different government agencies, producing what Senator Henry M. Jackson (D-Washington) described as "anarchy." A governmental task force concluded in 1967 that at least 20 million acres would have to be added to existing national parks, recreational areas and monuments in this decade alone merely to maintain present ratios of public acreage to population. Present levels of federal funding will not accomplish the needed land acquisition.

Some Congressional action has already been taken to safeguard areas of land for recreational use. Substantial funds have been appropriated for land acquisition, but there has been a considerable lag between appropriation and actual obtaining of the land by the federal government, due to disputes with states and individual land-owners. Land speculators have driven up the costs of acquiring some of these areas, necessitating an appeal to Congress for appropriation of additional funds. In 1964 Congress established the Land and Water Conservation Fund and charged it with the responsibility of acquiring new parks and recreation facilities. It was to be funded at an annual rate of $200 million for five years. However, in 1968, the Johnson Administration cut the fund back to $154 million, and in April, 1969, the Nixon Administration pared it even further - to $124 million - as part of the drive against inflation. Five months hence, the Budget Bureau informed the chairman of the House Interior and Insular Affairs Committee, Representative Wayne N. Aspinall (D-Colorado) that Congress would not have adequate funds in fiscal 1973 even to carry out some modest land acquisition proposals which had already been authorized. Incensed, Aspinall declared it "made no sense" for the Committee to pass any further authorization bills for land acquisition, since they were not going to be funded anyway. Senator Jackson concurred. Legislation authorizing new parks and recreation areas was cancelled.

This development brought down upon the Nixon Administration the wrath of conservationists and their allies in Congress. Possibly due to the emergence of the environmental crisis as a major campaign issue, the Administration suddenly reversed its field, eliminating previous cuts and proposing maximal funding for the LWCF during the current year. The growing scarcity and cost of recreation areas in urban areas was cited by an Interior Department spokesman as the chief determinant of the sudden change in policy. In his February 10 address to Congress concerning the environment crisis, the President called for the expenditure of the full $327 million available under the LWCF, with priority to be given to acquisition of lands in close proximity to urban centers.

The growing Congressional influence of the conservation forces was made manifest in February 26, 1970, when the House refused, on a 150-228 roll-call vote, to consider the National Forest and Timber Conservation and Management Act. A coalition of environmental interest had apparently "out-lobbied" timber concerns which had sought to accelerate lumbering operations within the national forests. Other environmental protection measures have been developed in Congress, but inadequate funding and bureaucratic impediments have often hampered their implementation. A pro-environment measure which has been revived recently is the highway beautification campaign which was associated with its most vocal public proponent, Mrs. Lyndon B. Johnson, when it passed in 1965. The act sought to beautify the nation's federal-aid highways by authorizing control of advertising billboards, junkyards and landscaping of areas adjacent to the highways. However, the act subsequently died on the vine due to insufficient funds. The Senate passed a bill on November 6, 1969, which authorized $15 million for pilot projects to remove billboards from highways, but the House Public Works Committee had not acted on it as of July, 1970.

Substantial areas of national forests which are still in their natural state have been designated as part of the National Wilderness Preservation System, to protect them from commercial exploitation. Established in 1964, the System encompassed originally 9.1 million acres of national forest lands, and 800,000 additional acres were included in 1968. New tracts of land, including all primitive areas of the national forests and all roadless units of the National Parks and Wildlife Refuge System were eligible for inclusion in the Wilderness program. Some 140 such areas were identified, but in the first half of a 10-year period in which it was to act on these areas, Congress added only seven.

In 1968, Congress passed the Wild and Scenic Rivers Act, after six years of debate. Intended to preserve stretches of wild and scenic rivers in their natural state, the bill named eight rivers to be included in the initial program, and designated 27 more to be reviewed for possible future inclusion. The Act also authorized states to select other rivers for such protection, as long as they assumed the full financial burden. As of 1970, no new rivers beyond the 27 originally specified had come under consideration. At that time, 12 states were actively involved in protection of wild and scenic rivers, 11 were considering legislation to implement such measures, and 8 had directed study groups to investigate the possibility of so doing.

Although by 1970 steps had been taken to acquire park lands and establish wilderness areas, there was still a need for a central federal plan to coordinate the efforts of the individual states. A step in this direction was taken with the introduction of the National Land-Use Policy Act of 1970 by Senator Jackson, chairman of the Senate Interior and Insular Affairs Committee. The Act provided for grants-in-aid totaling $50 million to delineate and carry out statewide land-utilization plans. The funds were to be earmarked for the establishment of land-use planning agencies, by hiring and training personnel in land management. The planning agencies would be composed of ecologists, industrialists and others. Their primary purpose would be to coordinate land usage in such a way as to achieve optimum industrial and recreational benefits without endangering the environment. They would be empowered to acquire land, regulate development in certain areas specified in the plan and conduct public hearings concerning the plan. Under the 1970 Act, states would be required to meet certain minimum standards in land-planning in order to qualify for grants-in-aid. States would also be compelled to develop an acceptable land-use plan within four years, or face general punitive cutbacks in federal assistance (probably highway funds) of up to 20%. To administer the program, the Act called for a Federal Land and Water Resources Planning Council to be headed by the Secretary of the Interior. When he introduced the National Land-Use Policy Act, Jackson cited a 3- year projected population increase of 100 million and probably doubling of the gross national product within the next decade as factors which would intensify pressure on the nation's resources. One of the foremost problems in national land management, Jackson maintained, is the lack of coordination among different agencies within the federal government, all pursuing single-purpose objectives such as highway building, dam construction or urban renewal, without regard for the impact of their projects upon other government programs. For example, the Army Corps of Engineers, the National Park Service, the Dade County Port Authority and the Department of Transportation, as well as Congress, have been working at cross purposes concerning the future of Everglades National Park in Florida. Similar instances of internecine governmental conflicts concerning land-use have pitted highways against parks, dams against unspoiled rivers, industry against scenery, open beaches against commercial development, and commerce against wilderness. Only a few days after he had delivered his address on the environmental crisis, President Nixon announced public support for large federal expenditures for a new highway system.

Although the Congressional mood appears to have shifted toward environmental protection, there are still many interest groups involved who must provide the nation with essentials such as power, housing, highways, minerals, timber and other resources. Controversy is therefore inevitable at hearings and in Congressional committee meetings. The solution to such conflicts, asserts Representative Aspinall, is for each group to have the forebearance to take in the overview of the issues involved in land management, rather than focus only on the issues which affect them directly. He urged interested parties to read the

Public Land Review Commission's report in its entirety, rather than just the particular sections which apply to their individual situations. Controversy is not limited to the pitched battle between conservationists and industries which depend on some form of environmental exploitation, however. Even the ranks of the conservationists are divided into two factions - the protectionists and the recreationists. The protectionists seek to preserve land in its natural state, without any organized form of utilization. Recreationists, on the other hand, believe in opening these areas to the public for recreational use, with adequate protection for the environment. The two factions recently clashed in Mineral King, a wilderness valley in the Sierra Nevadas 200 miles north of Los Angeles. Walt Disney Productions sought to develop a $35 million resort there early in 1969. Protectionists, led by the Sierra Club, contended that the resort and the access roads to it would destroy the ecology of the area. Disney enterprisers countered that it had taken extensive precautions to safeguard the valley's ecosystem. The California chapter of the National Wildlife Federation spoke in Disney's behalf, claiming that visitors would come anyway, and that careful ecology-minded development was therefore in the best long-term interest of the area.

The Administration's sudden initiative in land acquisition revived a plan which had previously been announced by then Secretary of the Interior Walter J. Hickel calling for $6.3 in federal aid intended for building parks in urban areas. The Nixon message to Congress indicated that urban areas would have priority in the recreational land-acquisition campaign. Preliminary studies have been made for parks projects in New York City, Washington, D.C., and San Francisco.

Americans have a great deal at stake in the determination of how its remaining lands are to be utilized. Indications are, however, that national consciousness of man's inter-relationship with his environment is increasing, and future governmental actions are apt to reflect this trend. Adlai Stevenson gave eloquent expression to the delicate balance between man and nature in his final speech to the Economic and Social Council of the United Nations:

"We travel together, passengers on a little spaceship, dependent on its vulnerable resources of air and soil; all committed for our safety to its security and peace; preserved from anninilation only by the care, the work, and I will say, the love we give our fragile craft."*

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*Congressional Quarterly, Man's Control of the Environment, (Washington: 1970), P. 39.

TEACHER COMMENT NO. 22 : International Pressures

Pollution does not honor national boundaries. "For the task of saving the environment, nothing less than a new step toward world order will do," United Nations Secretary General U Thant declared. "This is the first time in its history that mankind faces not merely a threat, but an actual world-wide crisis involving all living creatures, all vegetable life, the entire system in which we live, and all nations large or small, advanced or developing. It is a crisis which concerns literally everyone, and involves, directly or indirectly, almost everything." The Secretary General stated that necessity now impels nations to "depart radically from the hitherto sacred paths of national sovereignty." " We face a rapidly increasing imbalance between the life-sustaining systems of the earth and the demands, industrial, agricultural, technological and demographic, which its inhabitants put upon it... If we fail to meet that challenge, it could become an unthinkable disaster for our children." *

There is mounting domestic pressure for the United States to actively promote the internationalization of the environmental protection campaign. Senator Warren G. Magnuson (D-Washington) has introduced a resolution calling for the formation of a World Environmental Institute to serve the function U Thant described. "I want the United States to take the leadership in establishing an international authority to deal with global environmental problems," Magnuson stated. ** A major issue which would be brought to bear upon the formation of any such institute, of course, would be precisely the same concept U Thant alluded to- national sovereignty. The United Nations planned a Conference on Human Environment in Stockholm, Sweden, for June, 1970.

An internationally based environmental group headquartered in San Francisco is Friends of the Earth. It was formed by David R. Brower of Berkeley, California, after Brower's activist philosophies resulted in his ouster from Sierra Club's executive directorship, and its subsidiary, the League of Conservation Voters. Brower also heads the John Muir Institute for Environmental Studies, which is a non-profit and tax-exempt organization. The Friends of the Earth and the League of Conservation Voters, however, do not hold tax- exempt status, owing to their active involvement in politics. The Friends of the Earth is a registered Congressional lobby organization whose objective is "to promote legislation to preserve, restore and encourage rational use of the ecosphere." Brower said the organization would be "extremely aggressive and noncompromising in (its) activities." ***

*Congressional Quarterly, Man's Control of the Environment, (Washington: 1970), p.67.

**Ibid.

***Congressional Quarterly, op. cit., p.68

SELECTED RESOURCES

SELECTED RESOURCES

This compilation of resources material is by no means exhaustive. It is intended to "start" your search for those teaching aids which are most appropriate for your students and teaching style.

Many of these selections are mentioned throughout the Learning Activities while others are listed only as supplementary entries. The slides, the two case studies, some cassette tapes, and some films and filmstrips are intregal parts of specific Learning Activities. Suggested books, films, cassettes, and organizations are noted for your convenience and consideration.

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A1A MOBILE HOME PARK INC. VS. BREVARD COUNTY FLORIDA CASE STUDY

"The testimony demonstrates there is no problem with odor on the Plaintiff's property when the wind is blowing from East Northeast to North and from North to West Northwest. The principal problem occurs when the wind is from Southeast to South and South to Southwest and does not occur all the time even from these directions. It does occur with such frequency as to constitute both a private and a public nuisance and therefore should be enjoined." . . . Brevard County Circuit Court opinion from A1A Mobile Home Park Inc. vs. Brevard County.

INTRODUCTION

In 1968, Brevard County submitted an application to the State Board of Health to construct the South Beaches Sewer Treatment Plant. The application was granted with the written stipulation that the plant would be constructed at least 400 feet from the nearest human habitation. As the time for construction neared the county changed the location of the plant and in fact built it only 50 feet from occupied dwellings at the A1A Mobile Home Park.

The owners and occupants of the mobile home park said that they were led to believe that the actual sewer plant would be built farther away from their dwellings than it actually was.

After the plant was completed, the occupants of the mobile home park began to complain of noise, bad odor, and bright lights which were creating a nuisance to them and the owners of the park took the case to court.

THE PLAINTIFF'S ARGUMENTS

- They were mis-led by the County officials from the very beginning as to the location of the plant.
- The plant was such a nuisance that people were moving out of the park and therefore it was causing economic damage to the owners of the park.
- Mr. Ray Pratt, a retired building contractor of Paynesville, Ohio, had been living in the park for three years and he testified that the odor eminating from the park had been very obnoxious since about three months after the plant began operating; and that sometimes the odor was so bad, would gag and have to walk down to the beach and sit until he could get his breath back.
- Mr. and Mrs. Paul Burrell testified that they had lived at the park for five months a year for eighteen years. They were having some guests over for dinner one night and by the time dinner was served, both the food and the dessert had the odor of sewage.
- At the time the plant was built, the ground water level on the Plaintiff's property was about six feet. Because of the polishing ponds constructed by the defendant, the ground water level is now from one and one-half to two feet making it necessary for the plaintiff to connect to the county's sewerage line.
- The large lights at the plant caused several occupants of the Mobile Home park to loose sleep. This created both physical and emotional distress for these people.
- Noise from the plant was also cited as creating a disturbance to the occupants of the park.
- Witnesses for the Plaintiff were all responsible citizens including: a former mayor, a bank official, an industrialist, and a commercial building contractor.

THE ARGUMENTS FOR THE DEFENSE

- The citizens of Brevard County have almost $1,000,000 invested in the facility. The facility is badly needed and serves six to eight miles which includes a portion of the towns of Satellite Beach,
- Indian Harbour Beach, Indialantic and Melbourne Beach.
- There is one city in Florida, in which such a facility is located next door to city hall. It is very common to find such facilities very near dwelling places and the odors are objectionable only to the most sensitive nostrils.
- Ralph H. Baker, Jr., head of the Waste Water Division of the State Board of Health (now Division of Health and Rehabilitative Services, and who holds both a B. S. degree in Civil Engineering and a Masters Degree in Sanitary Engineering from MIT) testified that it had been found that eighty per cent of all odor complaints are psychological in nature.
- The defense raised the defense of sovereign immunity which basically means that the state should be immune from being sued since it is acting in the public interest (one interpretation of sovereign immunity is "the king can do no wrong").
- The plaintiff waited too long to file a claim against the County. If the plaintiff thought his rights were being violated he should have filed a complaint before the completion of the plant and the large amount of money which was expended on the plant. In law this is known as the defense of laches, which means inexcusable delay in forwarding a claim.

SUMMARY OF THE COURT'S OPINION

After reviewing the history of the case, the court found that:

- When the County applied to the State Board of Health for a permit to build the South Beaches Sewer Treatment Plant, they stated that the plant would be located at least 400 feet from the nearest human habitation.
- Later the County decided to change the plant site and, without advising the State, chose a site which was only 50 feet from occupied dwellings.
- Mr. A. E. O'Neal, whose firm had the responsibility for the lift stations, the pressure lines and the treatment plant, and general supervision of construction, testified that he gave no consideration to the effect the treatment plant would have on A1A Mobile Home Park because he felt there would be none. The evidence shows and the Court finds to the contrary.
- The problem of odor does occur with such frequency as to constitute both a private and a public nuisance and therefore should be enjoined.
- The citizens of Brevard County have almost $1,000,000 invested in this facility and the facility is badly needed. Also, there are other areas of the state where such plants are located next to dwelling places.
- The plaintiff is to select a registered engineer, at the County's expense and the County is to select an engineer and these two engineers are to present to the Court within 90 days, a plan which both agree would rid the plaintiff's property of the objectionable odors eminating from the defendant's facility. If these two engineers cannot agree, then they shall agree upon a third sanitary engineer and the majority opinion of the three will prevail.

- Because of the polishing ponds constructed by the defendant, the ground water level is now from one and one-half to two feet. Therefore, the County should be required to bear the expense of the extra work and materials, if any, in connecting the plaintiff's sewerage to the County's line occasioned by the change in the ground water level.
- Final judgment will be entered after the Court receives the engineering report.

Volie A. Williams, Jr.
Circuit Judge
18th Judicial Circuit
Civil Action No. 52281

REFERENCE POINTS

Laches:

Judge Volie Williams, Jr. said that the defense of laches simply means sleeping on your rights when one has a duty to speak. He quoted the late Justice Glen Terrell: "To permit such a contention to prevail would be to chloroform the element of right and justice on which such controversies rest and glorify any technical defense offered to defeat it."

Sovereign Immunity:

Justice Terrell: "If a state agency can deliberately trespass on and destroy the property of the citizen in the manner shown to have been done here and then be relieved from making restitution on the plea of nonliability of the State for suit, then the constitutional guaranty of the right to own and dispose of property becomes nothing more than the tinkling of empty words. Such a holding would raise administrative boards above the law and clothe them with an air of magalomania that would eternally jeopardize the property right of the citizens.

American democracy is a distinct departure from other democracies in that we place the emphasis on the individual and protect him in his personal property rights against the State and all other assailants."

Nuisance:

Florida Statutes

823.05 Places declared a nuisance; may be abated and enjoined . . .

Whoever shall erect, establish, continue, or maintain, own or lease any building, booth, tent or place which tends to annoy the community or injure the health of the community, or become manifestly injurious to the morals or manners of the people as described in Ch. 823.01, or shall be frequented by the class of persons mentioned in Ch. 856.02, or any house or place of prostitution, assignation, lewdness or place or building where games of chance are engaged in violation of law or any place where any law of the state is violated, shall be deemed guilty of maintaining a nuisance, and the building, errection, place, tent or booth and the furniture, fixtures and contents are declared a nuisance. All such places or persons shall be abated or enjoined as provided in Ch. 64.11 and Ch. 64.15.

QUESTIONS FOR FURTHER DISCUSSION

1. Under what conditions should the government disregard the wishes of an individual in order to provide a public service?

2. Which side do you think was right in this case? Why?

3. What do you think of Mr. Baker's testimony that "eighty per cent of all odor complaints are psychological in nature"? Do you think that the complaints in this case might be "psychological" in nature?

4. Do you think that the State should be immune from being sued? Why or why not?

5. Why did the plaintiff wait until the plant was completed and all of the money had been invested in it before he sought court action? Did this help or hurt his case?

6. Do you agree with the Court's decision? Why or why not?

Sewer Plant On Bad Site, Court Told

A circuit court trial was recessed Friday until Jan. 6 after two days of testimony from residents of a South Brevard mobile home park who said they will move away if odor and noise from the nearby South Brevard Beaches Sewer Plant are not eliminated.

Numerous residents complained of noise and sewage smell problems Friday, and Ralph Baker, director of the Bureau of Sanitary Engineering, State Health Department, said the plant was built too close to the A1A Mobile Home Park south of Melbourne Beach.

Judge Richard Muldrew recessed the trial, and the plaintiffs' attorney is expected to complete his case Jan. 6, with Brevard County officials beginning their defense that day.

The fifth-floor courtroom in Titusville was almost filled to capacity all day Thursday and Friday with residents of the A1A Mobile Home Park south of Melbourne Beach.

The residents, mostly retirees, are suing the county, charging the $3 million sewer plant is a nuisance and should be shut down.

Richard Shanklin, an engineer, testified Thursday it was his opinion that sewage treatment units were placed too close to the trailer park's property line.

The units, which sit 50 feet away from the boundary line, "are close enough to consider they would create problems from the standpoint of their being upwind from the park," Shanklin said.

"And the fact that the surface of the tanks are exposed makes it very probable the odors and noises from the pumps and motors would create problems with surrounding residents."

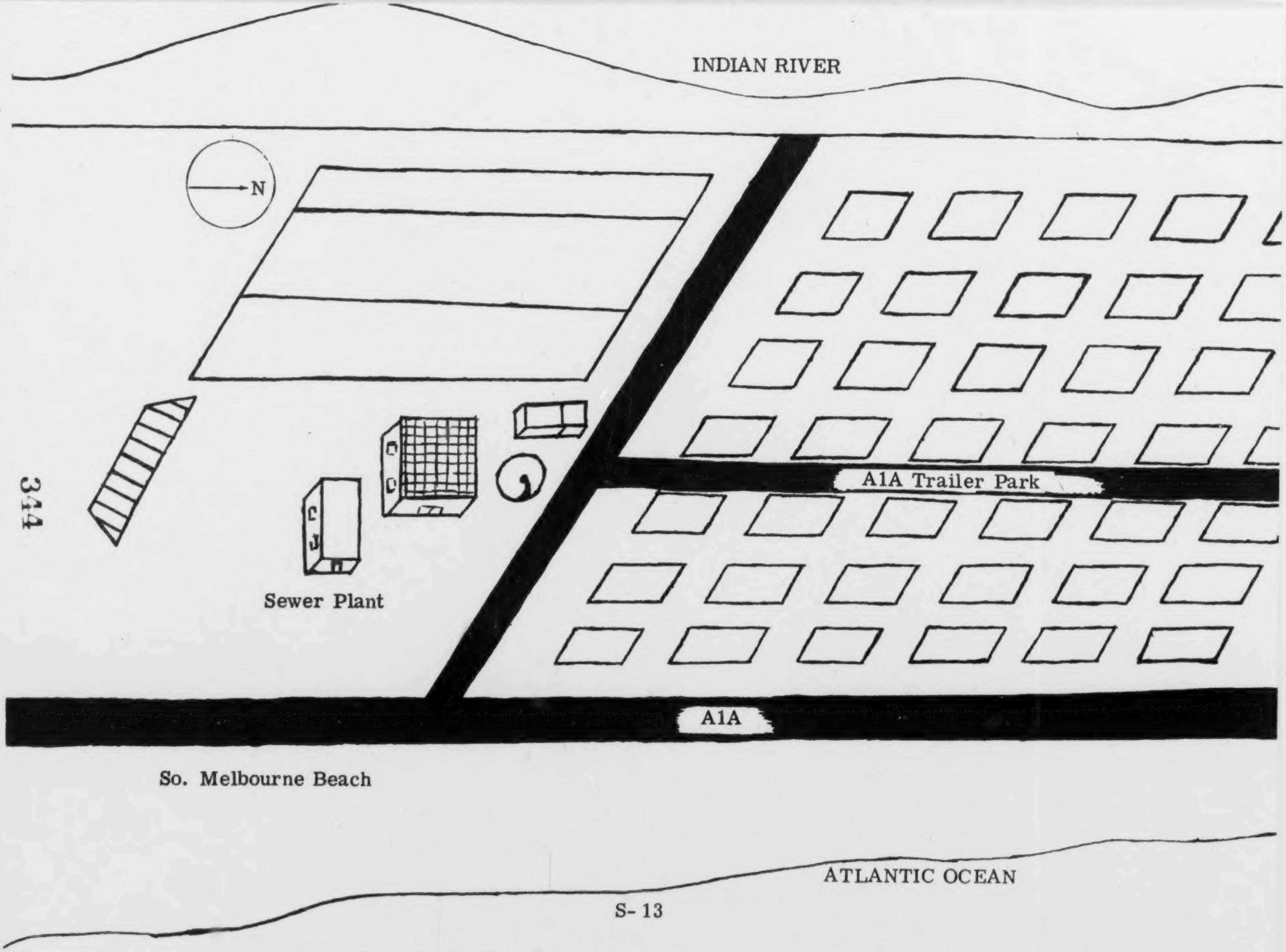
As a matter of general practice, Shanklin said the structures should set back 300 feet from the trailer park's boundary line instead of 50 feet.

Shanklin testified he visited the park Wednesday night and could "smell odor associated with raw sewage and noises from blowers and machinery."

The Fourth District Court of Appeals earlier this year overruled Judge Williams' decision allowing the South Beaches Sewer Plant to be constructed at its present location.

The ruling, in effect, ordered Williams to hear the case of the mobile home park.

The sewer plant has been in full operation since the fall of 1970. The most drastic outcome of the non-jury trial could be to force Brevard County officials to uproot the plant and situate it elsewhere. But such an outcome is not likely, a court source said.


INDIAN RIVER
N
A1A Trailer Park
Sewer Plant
A1A
So. Melbourne Beach
ATLANTIC OCEAN

S- 13

THE APPLEGATE CASE STUDY

(Slide 8 - West approach to Applegate house)*

The house sits there serenely awaiting the next wave to come near and splash against the barrier improvised from junk cars. Tourists and other curious passers-by holler out indignantly, "You built the house kinda close to the water, didn't you?". The year is 1972 and everyone is seemingly conscious of the environment and yet we find one person apparently building a junk pile in her own front yard. "An eyesore", some call it. Has she no sensitivity to the beauty of the ocean? Mrs. Lynne Applegate has a story to tell, a story that began in 1960 when the beach was big and beautiful. Miles north of the Applegate home, a port was developed by the U.S. Army Corps of Engineers and a jetty constructed to keep back the sand that normally flowed from the north to the south. The jetty was needed to keep the sand from filling up the channel depth, which is vital to the port. A few years later, in 1963, the property owners at the beach began to notice that they didn't have to walk as far to the ocean as they once did (Slide 9). The U.S. Army Corps of Engineers were quoted by the Brevard Sentinel-Star as "investigating the problem."

Years went by and no one offered a plan to keep chunks of the beach from washing out into the ocean. The movement of Hurricane Gladys in October of 1968 served to bring to public attention the dilemna of the Applegate home. Waves crept to within four feet of her home. An appeal to the local Civil Defense office by Mrs. Applegate brought little comfort. She was advised that Civil Defense couldn't do anything until the ocean waters started breaking against the house.

The seasons of hurricanes only accelerated the erosion of the beach. The jetty at the Port, while serving its intended function, was the sole cause of the erosion of beach properties. Sand which normally flowed down the coast and fed the hungry, pounding surf was building up on the shore north of the jetty, while hundreds of feet of ocean front land to the south were swallowed whole by the ocean, never to return (Slide 10). At the urging of Mrs. Applegate, every level of government became aware of her vanishing property. A Brevard County Commissioner in 1968, George King, Jr., endorsed a plan to install a palmetto log jetty backed up with surplus concrete debris in front of the Applegate home as an effort to change the direction of the current. Commissioner King consulted with the Superintendent of the County District 3 Road and Bridge Department, George Hamilton, and County Engineer, Earl Melvin, and got the approval of William Carlton of the Beaches and Shore Division of the Florida State Department of Conservation. Work was begun. (Slide 11) This construction project was approved by State and County officials as an emergency measure while a more permanent solution to the erosion was being devised.

The U.S. Army Corps of Engineers, who first constructed the port jetty which caused the problem, began to talk of plans to construct a 1.8 million dollar "sand transfer plant" on the north side of the Port Canaveral Harbor entrance. Once the plant is operational, sand would be pumped through underground pipes from the north side over to the south side in an attempt to recreate what was once a natural flow. When this plan was devised, in the fall of 1968, they held out hope that the " sand transfer plant" would be complete in two years. But what of the property already lost to the ocean? The " sand transfer plant" would only hope to maintain the existing shoreline, not rebuild it.

The possibility of re-building the beach property was often discussed by city, county, state, and federal officials who devised a plan using federal money to "match funds" with local and state monies. The cost to restore 150 feet of beach was estimated to be 1.5 million dollars in early 1969 when these plans were first discussed. The plan had one particular requirement that made it unreasonable in the view of beach property owners. "Give up any claim of ownership to the beaches in front of your homes and the public funds will be available to rebuild them." "We cannot spend public money for the improvement of private property." The owners were given hard choices: relinquish ownership, or go to the wallet with other beach owners for a do-it-yourself project, or sit back and watch the waves roll in.

For Mrs. Applegate, and others, who years ago paid premium prices for land now submerged, the very thought of giving up any claim to it was totally absurd. While other property owners fought the idea in court Mrs. Applegate directed her efforts to fighting back directly against the pounding surf only four feet from her door!

Only 11 days after cement was poured between and around the palmetto log pilings in an effort to break waves and deter erosion, it was evident that the ocean was determined to have its usual gulp of sand even if it had to go under concrete to get it!

On October 17, 1969, President Nixon ordered funds for planned federal construction projects be temporarily withheld; this delay halted the finalization of plans for the long awaited "sand transfer plant."

By late 1969 and early 1970, the ground in front of the Applegate home began to develop huge cracks. (Slide 12) The situation, always serious, was now desperate! Mrs. Applegate attempted to get help from city, county, and state officials, but the answer was always the same, "We can't legally spend tax money to solve a problem of one private landowner." Taking the situation into her own hands she hired a "drag-line" to move beach sand to the front of her home. (Slide 13)

The drag-line filling operation was only a temporary solution in an effort to buy precious time while the three levels of government bureaucracy churned and dragged through the motions of planning an effective attack on the erosion problem at some future time. State legislators, meanwhile, passed laws regulating the dredging and land fill operations, popular methods that real-estate developers used to create building sites, wherever needed. Environmentalists generally believed this a victory, but for Mrs. Applegate and her neighbors on the shore, the law meant certain surrender to the will of the ocean, as use of a drag-line, and/or bulldozer, to rebuild their lost land was now deemed illegal.

The state legislators were made aware of the special erosion problems of Brevard County and in a law, passed July 2, 1970, made Brevard County an "erosion prevention district," allowing the county to assess .16 mills for erosion control. ($160,000 can be levied without a referendum) Anxious to raise their 1/4 share of the total $2 million project cost, the Brevard County Commission, in May of 1971, held a referendum asking the county property owners to tax themselves an extra 1/2 mill which would raise the required one-half million dollars the first year. The increased tax burden on the owner of a $20,000 home was to be only $7.50 per year, yet when it came to a vote, the answer was NO. The Brevard County budget for beaches remained a mere $75,000; this was far from the required $500,000 to set the project in motion. Instead of a quick start on the erosion project, delays at all levels resulted: the U.S. Army Corps of Engineers delayed construction of the proposed "sand transfer plant" for further feasibility study; Congress required that the state and county governments have on hand one million dollars before they allocate their matching funds.

While funding problems enlarged, the beachfront continued to shrink at an even faster rate, assisted by a severe "northeaster" storm in December of 1971. Cape Canaveral City Manager, Bert Francis, estimated the damage at around $250,000, the value of the beach lost to the ocean.

The Cape Canaveral City Council at a regular meeting discussed a number of "drastic" actions they could take. (1) One way was a possible lawsuit against the Corps of Engineers and Port Canaveral. The City Attorney, Dick Scott, looked into possible grounds for such a suit and concluded that the city could not win against a semi-government agency such as the U.S. Army Corps of Engineers. The basic principle is that government agencies are "immune from lawsuits," an idea carried over from the English that the KING can do no wrong. One can sue to get an injunction to stop an action, or one can sue to force an action (action for mandamus) but a cash settlement is near to impossible. (2) City Councilman, Rogers Graefe, suggested the city might look into the possibility of getting the beach area declared a "disaster area" paving the way for possible federal or state funds.

A "disaster area" indeed! It was unlikely the area would now be declared a disaster; however, the public and the public officials has ignored for such a long time the following series which led to the real disaster:

1. Building a port that disrupted the natural flow of sand
2. Delaying, for lack of funds, the sand transfer plant, designed to restore this natural flow
3. Delaying the rebuilding of the beachfront until the money is raised and decisions made as to who owns the land
4. Losing the three beautiful palms to the ocean and being replaced by a palmetto-lot and cement barricade.

"Disaster" is a word usually attributed to some sudden, 24 hour tragedy striking without warning. During a disaster everyone moves to help and even money, that commodity scarcely around in usual circumstances, is immediately made available.

No help is immediately available for Mrs. Lynne Applegate and her home that dangles near the water, however (Slides 14 and 15). By outlawing the private use of drag-lines and bulldozers to rebuild the sand, the State of Florida left Mrs. Applegate only one other line of defense; her choice was building a sturdy barricade against the pounding surf. The county had tried before with state approval, but their barricade was ineffective. To the log and cement barricade, weighty discards were piled. It was ugly, but it was intended to buy needed time, while governments bickered over who, how and when to restore her submerged land. Now the junk cars are added and suddenly the public is shocked. The Applegate house is a news story again (Slides 16 and 17). A complaint was made to city officials by an apartment house owner whose property is near enough to the Applegate property to see this daring new debris, yet far enough from the ocean as to not be threatened yet himself. The city council of Cape Canaveral debates over what action to take. "If we find she is violating city dumping ordinances we can act outselves," said City Manager, Bert Francis, adding that the city must first determine whether the State or even the Army Corps of Engineers has jurisdiction. It was determined, some of the new debris lay on property technically belonging to the city. and some debris was in an area defined as within the jurisdiction of the State of Florida Department of Natural Resources. who have authority on all matters from the "high water mark" (that edge of the surf at high tide) and 50 feet out into the ocean. Since the high water mark has moved several hundred feet in 12 years. that mark, technically, now runs through the middle of the Applegate house.

A letter from Mr. W.T Carlton, Chief of Bureau of Beaches and Shores, State of Florida Department of Natural Resources explains the status of Mrs. Applegate's situation as of February, 1972:

February 10, 1972

Mrs. L.H. Applegate
18 Washington Avenue
Cape Canaveral, Florida 32920

Dear Mrs. Applegate:

You will recall our recent telephone conservation relating to emergency measures to protect your beach front property. Our staff has inspected your property on several occasions since I talked to you.

As stated to you in our telephone conservation, you should have secured the services of a professional engineer to advise you how to best protect your property. Also, you should have contacted us to secure permission to take this emergency action. We would have cooperated with you in every possible way and would have been in a position to give you some advise. Since you apparently elected to proceed without proper technical advice and without State approval, as required by Florida Statutes, we must now insist that you make a full report to us regarding this activity.

We are of the opinion that some of the material placed in front of your property helped to give you temporary protection. However, we must now request that you take immediate steps to clear the area of all debris such as old cars, tires, wood, and other material which will eventually disintegrate or be washed onto adjacent property. Your failure to comply with this request will make it necessary for us to take action as provided in Florida Statutes.

You are further advised that after a complete "clean-up" of the present situation, consideration should be given to some kind of permanent protection. Again you are advised to seek the assistance of a professional engineer. Such action at this time may well prevent your having to take emergency action in the future.

Please advise immediately your agreement to remove all loose debris, old cars, etc., as requested above.

Sincerely,

W. T. Carlton, Chief
Bureau of Beaches and Shores

The issue remains unresolved. The federal government used "public funds" to construct the port which caused the erosion problem - everyone agrees on that point. The area of disagreement lies in efforts to correct the problem. "We can't use public funds to improve private property" is a common response by government officials, yet public funds were used to destroy (in effect) private property. The federal government is willing only to pay one-half the cost to restore what they themselves destroyed leaving the remaining burden falling upon the community and state that years ago welcomed this federal port project.

In his letter to Mrs. Applegate, Mr. Carlton urged her to "seek the assistance of a professional engineer," . . . implying that she, a private citizen pay to build a barricade to protect what remains of her property from further damage by government caused erosion, and after building the barricade, she must also be content to claim only that property contained within the barricade once the governments finish rebuilding what was lost and calling it "public beach."

There is also the question of designing a workable barrier. Even consulting a "professional engineer" is no guarantee. In 1968, before the log jetty was constructed in front of the Applegate home, Brevard County engineers were consulted. Even Mr. Carlton approved the project, yet that barrier was totally ineffective. Mrs. Applegate's own engineering, while unsightly to be sure, has been more effective. The danger from broken glass and slivers of metal is no greater than the tons of glass bottles and metal beverage cans left on the beach each year by the same public that targets Mrs. Applegate for their outrage.

What is more outrageous, however, is that the State of Florida, through Mr. Carlton's office is determined to enforce a law (Slide 18) "statute # 161.052," which prohibits construction on a beach without a waiver from the State's Department of Natural Resources. Maximum penalty is a misdeameanor fine of $500 to $1,000.

Because she has failed to yield to directives from state officials insisting that she remove the junk car breakwater, Mrs. Lynne Applegate now faces a possible civil suit by the state's attorneys office (Slide 19).

In late April, Mrs. Applegate received court notice to remove her makeshift barriers (Slide 20).

When the case appears in court, a number of key issues will need to be resolved. In defense of Mrs. Applegate, she could make any one of the following claims:

CLAIM 1. The state has no jurisdiction because the "high water mark" should be defined as that edge of the surf at high tide when the property was purchased, not where it happens to fall, each year inching closer.

CLAIM 2. The state statute under which she is to be penalized (prohibits "construction" on a beach . . .etc.) is not applicable because she did no "constructing."

CLAIM 3. The federal government has damaged her property and with supporting evidence bring counter-suit against the federal government to force action to rebuild her property (action for mandamus) and seek cash re-imbursement for fines and other penalties likely to be imposed by the state and for local governments.

If you were the prosecuting attorney for the state, or Federal governments, what arguments would you use to present your case?

If you were the defense attorney, what collection of undisputed facts might help you substantiate any one, or all three of the hypothetical defense claims?

If you were the owner of the Applegate home and property, what would you have done, or what would you do now?

* All slides found on page S-35.

OTHER SOURCES

A. Books and Pamphlets

1. General

America the Raped, by Gene Marine. Avon Books Division of the Hearst Corporation, New York, 1969, $1.25. The whole sad story of how human folly has despoiled the American environment, primarily for private profit. Subtitled: "The Engineering Mentality and the Devastation of a Continent."

Moment in the Sun, by Robert Rienow and Leona Train Rienow. Ballantine Books, New York, 1967, $ .95. A report on the deteriorating quality of the American environment.

The Environmental Handbook, ed. by Garrett De Bell. Ballantine Books, 1970. A compilation of essays prepared for the first national environmental teach-in.

The Voter's Guide to Environmental Politics, ed. by Garret De Bell. Ballantine Books, New York, 1970, $1.95.

Environmental Action Projects for Clubs and Organizations. Available free of charge from the Center for Urban Studies, University of Miami, Coral Gables, Florida 33124.

Ecotactics: The Sierra Club Handbook for Environment Activists, ed. by John G. Mitchell with Constance Stellings, Pocket Books Division of Simon and Schuster, New York, 1970, $ .95.

Community Action for Environmental Quality, by the Citizens Advisory Committee on Environmental Quality. Available from U. S. Government Printing Office, Washington, D. C. 20402, $ .60.

President's Council on Recreation and Natural Beauty. From Sea to Shining Sea, A Report on the American Environment--Our Natural Heritage. (Washington D. C. : 1968) Superintendent of Documents, Government Printing Office, paper $2. 50.

Stewart, George Ripley. Not so Rich as You Think. (Boston: 1968) Houghton Mifflin, $5. 00.

A National Policy for the Environment. A Special Report to the Committee on Interior and Insular Affairs, U. S. Senate, July 11, 1968. (Request from Committee Chairman, U. S. Senate, Washington, D. C. 20510.)

Environmental Quality. Hearings before the Subcommittee on Science, Research, and Development of the Committee on Science and Astronautics, U. S. House of Representatives, 90th Congress, 2nd Session. (Request from Committee Chairman, address U. S. House of Representatives, Washington, D. C. 20515.)

Joint House-Senate Colloquim To Discuss A National Policy For the Environment. Hearing before the Committee of Interior and Insular Affairs, U. S. Senate, and Committee on Science and Astronautics, House. 90th Congress, 2nd Session, July 17, 1968. (Request from either Committee Chairman.)

Managing the Environment. Report of the Subcommittee on Science, Research, and Development to the Committee on Science and Astronautics, U. S. House of Representatives, 1968.

National Academy of Sciences, Ad Hoc Panel on Technology Assessment. Technology: Processes of Assessment and Choice. 1969. (Prepared for Committee on Science and Astronautics, U.S. House of Representatives.) Government Printing Office, $ .75.

President's Science Advisory Committee, Environmental Pollution Panel. Restoring the Quality of Our Environment. (Washington, D. C. : 1965) Government Printing Office, $1. 25.

U. S. Dept. of Health, Education, and Welfare, Task Force on Environmental Health and Related Problems. A Strategy for a Livable Environment. (Washington, D. C. : 1967) Government Printing Office, $ .60.

2. Florida

Environmental Problems in South Florida. A report of the Environmental Study Group of the National Academies of Science and Engineering, Washington, D. C. Dated March 1970, this booklet is an excellent semi-technical discussion of the major environmental problems of South Florida, particularly as they relate to the Everglades jetport.

Environmental Impact of the Big Cypress Swamp Jetport, United States Department of the Interior, September 1969. This is the "Leopold Report" and is available from either of the following two offices: U. S. Geological Survey, 903 West Tennessee St., Tallahassee, Fla. 32304 and U. S. Geological Survey, Room 730, Federal Building, 51 SW 1 Avenue, Miami, Florida 33130.

The Environmental Destruction of South Florida, ed. by William Ross McCluney.

B. Environmental Organizations

1. National Groups

Most of the organizations listed below provide informational and publication services and a number employ staff people to lend guidance to local groups. For more complete listing of organizations in the conservation field, you should consult the "Conservation Directory." This is published annually by the National Wildlife Federation, 1412 16th Street, N. W., Washington, D. C. 20036.

The Conservation Foundation
1250 Connecticut Avenue, N. W.
Washington, D. C. 20036

The Foundation seeks to further knowledge about the interaction between man and nature through research; it also seeks to have this knowledge applied to the practical problems of urban growth, such as river basin planning, highway design, and regional developmentment policies. It serves as a clearing house on information about significant new legislation and governmental programs, help for better conservation education in our schools, and has an extensive audio-visual-publications program.

Consumer Alliance, Inc.
P. O. Box 1242
Los Altos, California 94022

The Alliance is a new group organized to unite consumer purchasing power and political strength on a nationwide basis. It will give financial support to population-environment movement and may form the nucleus for an effective resurgence of consumer sovereignty.

Environmental Defense Fund, Inc.
P. O. Box 740
Stony Brook, N. Y. 11790

EDF, a national coalition of scientists, lawyers, citizens for protection of environmental quality, does not lobby in Congress, but has initiated lawsuits against enemies of the environment, from state and federal agencies supporting unsound programs to big industrial polluters. EDF started litigation to stop construction of the Florida barge canal on Oklawaha River by U.S. Army Corps of Engineers.

Friends of the Earth (F. O. E.)
30 East 42nd Street
New York, New York 10017

F. O. E. is not a tax-free organization, so it can and does lobby vigorously to achieve environmental quality and protection.

The Izaak Walton League of America
1326 Waukegan Road
Glenview, Illinois 60025

This membership organization promotes conservation of renewable natural resources and development and protection of outdoor recreation opportunities. Local chapters and divisions can furnish speakers and literature. The League publishes the Izaak Walter Magazine monthly and maintains a Conservation Office at 719 13th Street, N. W., Washington, D. C. 20005.

Keep America Beautiful, Inc.
99 Park Avenue
New York, New York 10016

This is a national, nonprofit, public service organization for the prevention of litter and for the enhancement of rural and urban scenic and man-made beauty. The organization publishes helpful brochures and newsletters on litter prevention.

League of Conservation Voters
917 15th Street, N. W.
Washington, D. C. 20005

This is the political arm of F. O. E. A strictly non-partisan organization, the League will raise money and recruit volunteers for candidates working to protect the environment.

League of Women Voters of the United States
1730 M Street, N. W.
Washington, D. C. 20036

This membership organization, with local and State Leagues, is dedicated "to promote political responsibility through informed and active participation of citizens in government." Members have been active in the pollution fight all over the country, including clean water, saving San Francisco Bay, and Hawaii's Diamond Head.

National Audubon Society
1130 5th Avenue
New York, N. Y. 10028

This membership organization dedicated to the conservation of wildlife and the natural environment has been a leader in blocking the Everglades jetport and in the fight against DDT. It publishes two bi-monthlies, AUDUBON magazine and AUDUBON FIELD NOTES.

National Wildlife Federation
1412 16th Street, N. W.
Washington, D. C. 20036

The Federation seeks to stimulate citizen and governmental action for the conservation of natural resources. It publishes THE CONSERVATION DIRECTORY annually at $1. 50 a copy.

The Nature Conservancy
1522 K Street, N. W.
Washington, D. C. 20005

This membership organization with local chapters buys up land vital to nature and preserves it for future public use.

Planned Parenthood-World Population
515 Madison Avenue
New York, N. Y. 10022

Through its affiliates and over 500 clinics, this organization provides family-planning information and services.

Population Reference Bureau
1775 Massachusetts Avenue, N. W.
Washington, D. C. 20036

This is the best information center or clearing house for data concerning the effects of the population explosion in the U. S. and worldwide. PRB regularly publishes bulletins, papers, and bibliographies concerning demography, economic, and social ramifications of growth.

Sierra Club
1050 Mills Tower
San Francisco, California 94104

A nation-wide organization with local chapters, the Sierra Club is devoted to the study and protection of the nation's scenic resources. It provides films, manuals, exhibits, speakers to interested parties.

The Wilderness Society
729 15th Street, N. W.
Washington, D. C. 20005

Its primary goal is the protection of wild lands and the acquisition of additional wilderness or primitive areas by the federal government. It has been an important influence of opposition to oil exploration in the Alaskan Arctic.

Zero Population Growth, Inc.
330 Second Street
Los Altos, California 94022

An international organization which exercises educational and political efforts primarily in population limitation legislation.

2. State and Local Groups

U.S. Army Corps of Engineers
Jacksonville, Florida

Mr. Howard Van Fossan
Florida State Board of Health
Brevard County
Rockledge, Florida

Mr. James T. Floyd, Chief
Information Education Division
Game and Freshwater Fish Commission
Tallahassee, Florida

Mr. A. W. Wren, President
ASPIRE, A Society to Preserve Indian River Ecology
South Highway A1A, Melbourne Beach, Florida

Mr. Allen Cruickshank
Indian River Audubon Society
Rockledge, Florida

Mr. Jerome Carroll
Conservation Officer Merritt Island National Wildlife Refuge
Titusville, Florida

Mr. Karl F. Eichhorn
Florida Defenders of the Environment and Indian River Audubon Society

Mrs. Archie Carr, Vice President
Florida Defenders of the Environment
P. O. Box 12063
Gainesville, Florida 32601

Conservation 70's
Dorian Building, 319 S. Monroe
Tallahassee, Florida

C. Films

For All to Enjoy	20 min., color. $10. Satirical approach to uncontrolled development in National Parks. Conservation Foundation, 1250 Connecticut Ave., N.W., Washington, D. C. 20036.
Garbage	10 min., color, $125 (sale). A sequence of picture and sound impressions of endless garbage. King Screen Productions, Education Division, 320 Aurora Avenue, N., Seattle, Washington 98109.
Green City	23 min., color, $15. Civic action to preserve green space and open space as cities grow. Stuart Finley Productions.
Man and His Resources	28 min., b/w, $8. Contemporary, McGraw Hill, Film Rental Offices, 330 W. 42nd Street, New York, N. Y. 10036.
A Matter of Time	27 min., color, $10. Historical approach to environmental deterioration. Conservation Foundation, 1250 Connecticut Avenue, N.W., Washington, D. C. 20036.
Megalopolis: Cradle of the Future	22 min., b/w, $9. Dynamics of urbanization and emphasis on need for careful planning. Encyclopaedia Britannica Educational Corp.
No Turning Back	10 min., b/w, $4.50 (rental). Shows that the control of technology is a political problem.
Our Changing Environment	17 min., color, $8. Man's increasing power to control his environment has created new pressures and problems for the modern city. Encyclopaedia Britannica Educational Corporation.
The Poisoned Air	50 min., b/w, $275 (sale). Effectively treats scientific-technical aspects of air pollution as well as economic and political considerations. Carousel Films, 600 Grand Avenue, Ridgefield, N.J. 07657

Progress, Pork-Barrel and Pheasant Feathers	27 min., b/w, $12.50. Fight between Army Corps of Engineers wanting to build cross-Florida Barge Canal and the conservatioists in Oklawaha River Area. Contemporary.
Room to Breathe	26 min., color, $14.40 (rental). Examines controversy surrounding the proposed Delaware Water Gap National Recreational area. NBC Educational Enterprises, Inc., 30 Rockerfeller Plaza, New York, N. Y. 10020.
The Twenty-fourth and Tomorrow	22 min., b/w, $160 (sale). Shows the potential power of neighborhood groups to cope with community environment problems. ACI Films, Inc., 35 West 45th Street, New York, N. Y. 10036.
What Are We Doing to Our World?	Two parts, 30 min. each, $11 (rental). Field Service, Indiana University, A-V Center, Bloomington, Indiana 47401.
Crisis of Environment Series	Filmstrips, color, $97.50 (sale). A package of five filmstrips, recordings, and teacher's text placing stress of the role of values in the generation of public issues. The New York Times, Book and Educational Division.

D. Cassette Tapes

The following tapes may be requested from the Center for Environmental Education, Monroe Center, 705 Avocado Avenue, Cocoa, Florida 32922. These tapes were prepared and manufactured by The Center for Cassette Studies, Inc., 8110 Webb Avenue, N. Hollywood, California 91605.

The Big Snow Job	Analysis of the false assurances of environmental improvement. (27 min.)
Dangers of Pollution	Experts probe the hazards of water, soil, and air pollution. (46 min.)

The Death of Our Cities	Frank Lloyd Wright predicts the ruin of U. S. cities, April 22, 1956. (26 min.)
Ecological Politics	Dr. Robert Rienow talks about the environmental crisis & cures. (29 min.)
No Place to Flee	Dr. Robert Reinow predicts horrors of an overpopulated society. (28 min.)
Nuclear Power: Life or Death?	Experts discuss the pros & cons of nuclear power plants in the U. S. (46 min.)
Off-Shore Oil Drilling	Interior Secretary Hickel explores the dangers of off-shore drilling. (52 min.)
Shoulder to Shoulder	Frightening look at overpopulation, its present, its future & its control. (23 min.)
Suing For a Clean Environment	Joseph L. Sax discusses his model law for environmental legal action. (27 min.)
The Transportation Mess	A survey of the hazards of U. S. mass transit. (44 min.)
Urban Slurb	Prophets and men of action comment on the U. S. environment. (28 min.)
The World as a Wastebasket	Famous Americans discuss our effluent society. (29 min.)

The 20 35mm slides cannot be reproduced. They are as follows:

1. Littering fines
2. Littering fines
3. Sewer treatment plant
4. Raw sewage outfall
5. Garbage dump
6. Discarded objects
7. Trash/scenic beauty
8. West side of Applegate house
9.
10.
11.
12.
13.
14. South side of Applegate house
15. North side of Applegate house
16. Junk car barricade
17.
18.
19.
20.

The Eleventh Hour

The few remaining mammals of the sea — the whales, dolphins, porpoise, seals, walrus, polar bear, sea lions, manatees and otters — have been granted a temporary stay of execution. Your help is needed to bring them out of danger.

On December 1, thanks to your support, we won a victory for the animals over the best efforts of the National Rifle Association, the National Wildlife Federation and the other "sports-hunting" groups, the furriers and their pawns, the seal-kill bureaucrats of the Department of Commerce. The bill they endorse in the guise of "scientific management" — a patent effort to quell public furor, while permitting the senseless slaughter to continue — was sent to the floor of the House of Representatives for a vote. Happily, due to the zealous work of Rep. David Pryor (D-Ark.), our Washington counsel and volunteers, the vote was delayed, and the bill remanded to Committee for action in February or March. The details of these maneuvers are given on the next page.

NOW IS THE TIME for more letters (an original and copies if you like), spelling out in detail the protection you demand for the people of the sea. True protection is that given in the Harris-Pryor Ocean Mammal Protection bills (please note their new numbers: S. 2579 and H.R. 10569). These are the only honest bills on this issue before the Congress. Write to:

SENATE S. 2579

The Hon. Warren G. Magnuson
Chairman
Committee on Commerce
Senate Office Building
Washington, D. C. 20510

— and —

The Hon. Ernest F. Hollings
Chairman
Sub-Committee on Oceans and Atmosphere
Senate Office Building
Washington, D. C. 20510

— and —

Members of Sub-Committee:
(address Senate Office Building
Washington, D. C. 20510)

Marlow W. Cook (R-Ky.)
Robert P. Griffin (R-Mich.)
Philip A. Hart (D-Mich.)
Mark O. Hatfield (R-Ore.)
Daniel K. Inouye (D-Hawaii)
Russell B. Long (D-La.)
John O. Pastore (D-R. I.)
William B. Spong, Jr. (D-Va.)
Ted Stevens (R-Alaska)

— and —

Your two Senators

HOUSE H.R. 10569

The Hon. Edward A. Garmatz
Chairman
Committee on Merchant Marine and Fisheries
House Office Building
Washington, D. C. 20515

— and —

The Hon. John D. Dingell
Chairman
Sub-Committee on Fisheries and Wildlife Conservation
House Office Building
Washington, D. C. 20515

— and —

Members of Sub-Committee:
(address House Office Building
Washington, D. C. 20515)

Glenn M. Anderson (D-Calif.)
Mario Biaggi (D-N. Y.)
Eligio de la Garza (D-Tex.)
Thomas N. Downing (D-Va.)
Edwin B. Forsythe (R-N. J.)
George A. Goodling (R-Pa.)
Joseph E. Karth (D-Minn.)
Hastings Keith (R-Mass.)
Peter N. Kyros (D-Maine)
Robert L. Leggett (D-Calif.)
Alton Lennon (D-N. C.)
Speedy O. Long (D-La.)
Paul N. McCloskey (R-Calif.)
Jack H. McDonald (R-Mich.)
William S. Mailliard (R-Calif.)
Thomas M. Pelly (R-Wash.)
Paul G. Rogers (D-Fla.)
Philip E. Ruppe (R-Mich.)
Robert O. Tiernan (D-R. I.)

— and —

Your own Representative

Friend vs. Foe

On December 1, 1971, Congressman Edward Garmatz (D-Baltimore, Md.), Chairman, Committee on Merchant Marine and Fisheries, rejected the Harris-Pryor Ocean Mammal Protection Act. Instead, he reported out of Committee a bill that Congressman John Dingell (D-Detroit, Mich.), Fisheries and Wildlife Conservation Sub-Committee Chairman, had been drafting for several months: Rep. Glenn Anderson's (D-Calif.) Marine Mammal "Protection" Act (H.R. 10420). This bill, however, is not one that will provide protection to sea mammals, but rather one that will "manage" them on an "optimum sustained yield basis to insure the continuing availability of those products which move in interstate commerce." Rather than stopping the killing, this bill, as written, would perpetuate and legalize it through a permit system. It is an attempt to appease public sentiment, while continuing — and in some cases — increasing the killing.

The weakness of the Anderson bill is demonstrated by the fact that it has been endorsed by the fur industry, the firearms and hunting lobby, the U. S. Department of Commerce, and other private groups which have a vested interest in continuing the killing, "management," and hunting of ocean mammals. The bill has the co-sponsorship of only nine other Congressmen, and it has not been endorsed by any major newspapers of which we are aware.

The Harris-Pryor Bill, on the other hand, is co-sponsored by 26 members of the Senate and over 90 members of the House. It has been endorsed by all major newspapers in the Washington, D. C. area (*The Post, Evening Star, Daily News*), as well as many others nationwide including the *New York Times* and the *Louisville* (Ky.) *Courier-Journal.*

Congressmen and Senators report that they have received literally tens of thousands of letters in support of the Harris-Pryor Bill, with many stating that the flood of mail has been "unprecedented." We are particularly disappointed at the actions of Mr. Dingell and Mr. Garmatz, especially since Mr. Garmatz stated at the hearings that in his 25 years in Congress, he had never seen such public interest in an issue.

The method by which the Anderson bill was brought up for a vote before the House was a patent effort to get rid of the issue so that the slaughter can go on. On December 1, at 8 p.m., before most Congressmen had had a chance to see — much less study — the final bill and Committee report, it was brought up for vote under a "suspension" of parliamentary procedure (usually reserved for noncontroversial bills), under which very limited debate is allowed and *no* amendments may be offered.

Fortunately, this tactic was defeated by our dedicated Washington counsel and volunteers who worked tirelessly, distributing information and letters to every member of Congress the day before and the day of the vote. We are also grateful to *The New York Times, Washington Post,* and *Washington Evening Star,* whose eloquent editorial on this subject were instrumental in bringing the situation to the attention of Congress and the public. The highes praise, however, must go to Rep. David Pryor who lef the hospital bed of his very ill wife and spent the entir day and most of the evening successfully organizing suppor for delaying the vote on the bill until February or March of this year, at which time amendments can be offered.

It is essential that you write to your Congressman, a well as to Members of the House listed on Page 1, *as soon as possible* to vote against any crippling amendments to the Harris-Pryor Bill (H.R. 10569) — such as would allow tuna fishermen an exemption to continue the killing of hundreds of thousands of dolphins and porpoises each year in their huge "purse-seine" nets. Ask instead that the following principles of the Harris-Pryor Bill remain intact

1. Provide a moratorium of at least ten years on the killing of ocean mammals by U. S. citizens, except fo treaty obligations and nonwasteful native hunting.

2. Provide a total ban on the import into the U. S. o all ocean mammal products (including of course the baby harp seals killed by the hundreds of thousands in Canadian waters), thus removing the economic incentive for othe countries to kill them.

3. Require or strongly encourage the Secretary of State to negotiate treaties with other countries to protect ocean mammals.

4. Provide a determination by Congress to end the Pribilof seal kill, but in such a way as not to break our treaty obligations or encourage the resumption of pelagic sealing (killing on the high seas).

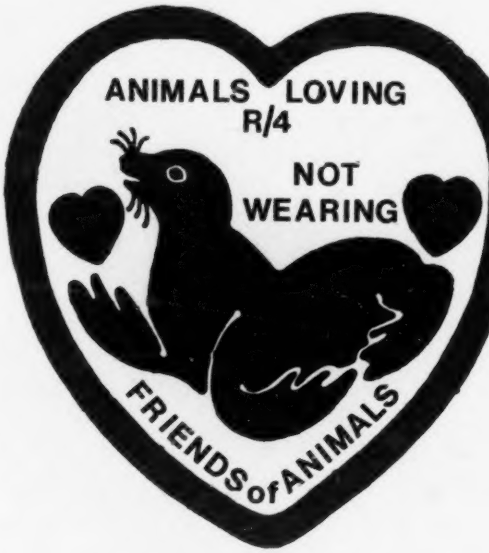
5. Give the responsibility for enforcing the regulations protecting ocean mammals to the Secretary of Interior rather than the Secretary of Commerce.

6. Refrain from the use of all language referring to "management" on an "optimum sustained yield basis" and other such kill-for-profit phrases that protect the profiteers not the animals.

In the Senate, the issue has been transferred from Senator Hart's Committee to Senator Ernest Hollings' (D-S. C.) Oceans and Atmosphere Sub-Committee of the Commerce Committee. While promising to hold early hearings, Senator Hollings has not, to date, scheduled them. Please write the Senator to quickly schedule hearings and to report out of his Committee the Harris-Pryor Bill (S. 2579). Ask your friends, particularly any you have in South Carolina, to do the same. This is especially important, since the Fouke Fur Company, the world's major processor of seal pelts, is located in Greenville, S. C., and will be putting as much pressure on Senator Hollings as it can bring to bear. We are confident that Senator Hollings will not bow to the vested interest groups if we give him the backing he needs to stand up to them.

Your letters have already done much to force Congress to act on this issue. Please, now that we are in the ELEVENTH HOUR, don't let up the pressure. Thank you.

This Is The Season For Love!



WEAR YOUR HEART ON YOUR SLEEVE.

Our love patch is sky blue, bordered in life-red . . . The perfect tribute to all your "valentines."

Drawing contributed by LEE ZAMEK

Not For Torture!

Rodeo has been added to the diversified interests of the R. J. Reynolds Tobacco Company. It has announced a $105,000 Winston Rodeo Championship awards program. The Rodeo Cowboys Association calls it "the biggest single boost ever given professional rodeo."

Reynolds deserves a big boost, too, for its outstanding contribution to animal brutality. So "boost" right out of your home and off your shopping list all of these products: Camel, Winston, Salem, Doral, Vantage and Tempo cigarettes, various pipe tobaccos, Chun King Chinese Foods, and all other R. J. Reynolds products.

Use your pen like a hot-rod and let Reynolds know that its sales will be punctured because you don't believe in the torture of animals for profit and pleasure. Write:

Mr. Alex Galloway, *President*
R. J. Reynolds Tobacco Company
401 West Main Street
Winston Salem, N.C. 27101

Miss Alice Herrington, *Chairman*
Committee for Humane Legislation, Inc.
11 West 60 Street • New York, N. Y. 10023

For the sole purpose of obtaining animal protection, please accept my donation of $________ payable to CHL.

Please send me:
(number)

________ Cloth heart patches ($1.00 each)

________ Copies of this February CHL bulletin (10 for $1.00)

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The Meat You Eat Is Seared with Pain

A challenge to the constitutionality of the Federal livestock slaughter act of 1958 has been made by a friend of animals, New York City attorney Henry Mark Holzer.

The law contains two contradictory definitions of "humane" slaughter. The first requires that the animal be rendered *unconscious* before being hung by a leg and cut. The second definition declares ritual slaughter, the shackling, hoisting and cutting of a *conscious* animal as "humane." Mr. Holzer, in filing his complaint in the Federal District Court, charges that the existence of the second definition is in violation of the first amendment's guarantee of separation of church and state.

Of the 150 million calves, lambs, steer and other livestock killed in the United States annually, about 20 million are kosher killed. The meat is sold to all Americans, and in metropolitan areas, all meat supplied is from the torturous slaughter of conscious animals.

Our Washington counsel, Bernard Fensterwald, has drafted a bill requiring that all livestock be spared this unnecessary pain and requires that packers who sell in commerce render the animals unconscious by modern methods. The sponsor of the bill is Kenneth Gray (D-Ill.).

Your letter of support for the bill, H.R. 10487, should be addressed to:

The Hon. Graham Purcell, *Chairman*
Livestock and Grains Sub-Committee of the Agriculture Committee
House of Representatives
Washigton, D.C. 20515

Committee for Humane Legislation, Inc.
11 West 60th Street
New York, N.Y. 10023

February, 1972

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